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Vol. 95 November 25, 1933 No. 22

In This Issue

What Is the Place of the Freight Container? ..... Page 751

This is Article No. 13 of the Traffic Development Series; it finds that new types of freight carriers for rail-highway co-ordination are showing promise in that connection as well as becoming important factors in the refinement of railway service.

Light-Weight Railroad Equipment 754

F. G. Gurley, assistant to the vice-president of the Chicago, Burlington & Quincy, reviews the economic reasons for present standards of car size and weight and outlines the progress being made toward weight reduction.

Storedoor Service Near on Eastern Lines 765

An article on developments in connection with the plan of the Pennsylvania, Erie, Grand Trunk Western and several connecting lines to inaugurate pick-up and delivery for l.c.l.

EDITORIALS

"Planned Economy" for Private Business Only? 747
"Scientific Research"—What and Why? 748
General Johnson Bemoans High Bus "Taxes" 750

GENERAL ARTICLES

What Is the Place of the Freight Container? 751
Light-Weight Railroad Equipment, by F. G. Gurley 754
Dismantles Historic Bridge of Obsolete Design, by P. G. Lang, Jr. 757
Henry Herman Westinghouse Dies 759
Records Show Value of Water Treatment, by E. L. E. Zahm 760
Freight Car Loading 760
Railways Answer Eastman's Questions on Legislation 761
Cab Signals on the Boston & Maine 764

MOTOR TRANSPORT SECTION

Storedoor Service Near on Eastern Lines 765
Co-ordination in Britain, by C. E. R. Sherrington 768

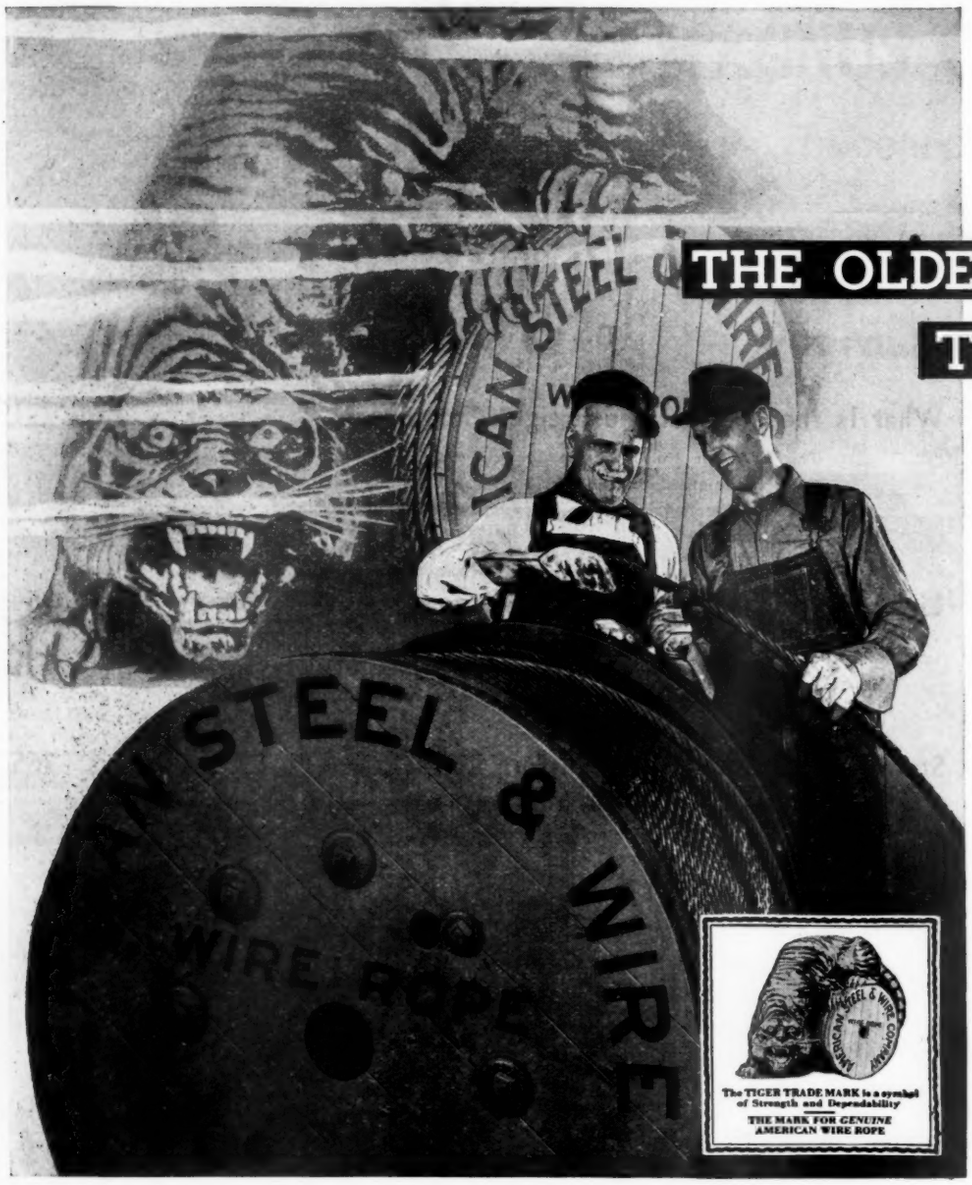
A COMMUNICATION 770

ODDS AND ENDS 770

NEWS 771

The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service

WHAT'S BACK OF WIRE ROPE IS VITAL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RAILWAY AGE

"Planned Economy" for Private Business Only?

"Planned economy" is a much discussed subject these days, and, to a greater or lesser degree, is a policy viewed with favor by the administration at Washington. It is no novelty to the railroads, as their policies affecting the public have been subject to social control for many years. A planned economy is one in which investment is controlled, the purpose being to protect existing investment by preventing over-expansion and resulting wasteful competition and financial losses. Prevention of unfair trade practices and labor policies, the establishment of uniform accounting, price control—all these are other elements which may be included in a "planned economy," and all of them have been in effect for years as far as the railways are concerned. That the analogy between the control now exercised over the railways and that in mind for industry in general is clear is indicated by the following quotation from "Business Week" for November 11:

> President Roosevelt is set upon instituting government control of all lines of industry to much the same degree that the Interstate Commerce Commission now controls the railroads. . . . The fundamental idea is to prevent undue expansion of booms and undue depths for depressions. In many recent conversations, the President has dwelt at length on the excessive capacity of many lines of business. . . .
>
> It is Roosevelt's idea that if promoters proposed erection of a cement mill, or a steel rail plant, or a shoe factory, and proposed to issue securities to finance it, they would be stopped by the Trade Commission, under the Securities Act. That is under operation. If the same promoters attempted to enlarge capacity in any of these lines—or any others, the government being the judge as to which lines should be prevented from further expansion—then the revamped NRA, by whatever name it might come to have, would step in and save the existing industry from this excessive competition.

Why Not "Planned Economy" for Government Investment?

Regardless of whether one approves or disapproves such extensive control of industry by the government, there is a logic difficult to escape—if one assumes that government control of the railroads is necessary—that indicates similar remedies for similar maladies. In other words, if such government regulation of the railways as now prevails be accepted as sound, then it is difficult logically to criticise the government for attempting to control competition, investment and other phases of the activities of important industries which may affect the public interest.

There is one aspect of the "planned economy" policy, however, as it so far has been developed by the government, which can quite plainly be called into question. This is its failure to maintain, in the planning, the same standards for economic services provided partly or entirely by the government as for those provided by private capital and enterprise. Certificates of "convenience and necessity" are required before a new line of railway may be built, and government permission must be obtained before railway securities may be issued and sold to the public. Apparently a similar policy will be applied to restrict expansion and investment in other private industries. Whether the policy be good or bad, is there any excuse whatever for applying it only to private industry and entirely exempting from it government excursions into the industrial field?

Secretary of Agriculture Wallace is stumping the country in behalf of his program for reducing the acreage of cultivated agricultural land and paying the farmers to reduce their plantings of wheat and corn. Meantime, Secretary of the Interior Ickes has made a federal public works grant of $22,700,000 to finance the Casper Alcova irrigation district project in Wyoming whereby 63,000 acres of arid land will be brought into cultivation. As the Chicago Daily News says, "It requires no great stretch of imagination to foresee the day when the owners of the 63,000 acres will be paid to take out of production some of the land which the public works administration is financing." The government's numerous power projects constitute additional capital investment which will compete with existing power plants. What logic or effectiveness is there in preventing over-expansion of productive facilities by private capital when government funds are invested to produce an unusable surplus? Is there any reason for exercising less care in the investment of public funds than in the investment of those obtained from private sources?

Government Increases Transportation Duplication

Business and industrial leaders and public officials need to devote far more attention to this question than they have so far accorded it. They are constantly on the *qui vive* in the protection of local vested interests when railroad consolidation is discussed, while they

have either ignored or favored re-orientation of transportation accomplished by public funds which they would utterly condemn if attempted by private capital. The so-called St. Lawrence Seaway, if it develops as its proponents foresee, will effect a great re-orientation of trade routes and industry between the Middle West and the Atlantic. Not only traffic, but industry as well, will be diverted northward, leaving shattered capital values along the present path of trade and commerce. Yet the Interstate Commerce Commission last year refused permission to L. F. Loree and associates to construct a railway of low operating costs across Pennsylvania because there were no increases of traffic in sight which indicated that there was economic justification for the construction of an additional railway. If there is economic justification for restricting private investment in transportation, how can there be economic justification for investment by the government of the taxpayers' money in waterways and highways which will compete with existing lines and the total costs of transportation on which will be greater than they would be on railway lines that the government refuses to allow to be built?

We should make up our minds whether we want a planned economy or not, and, if we decide in the affirmative, apply the same rules to public investment as to private. Otherwise we shall have planned economy in name only. Would a competent regulatory commission issue a certificate of public convenience and necessity for the construction of the St. Lawrence Seaway, or the proposed Boston-Washington superhighway, or the improvement of the Missouri and the Upper Mississippi rivers in accordance with exactly the same considerations which would control it in authorizing, or refusing to authorize, new railway construction in those areas—economy and capacity of existing transportation facilities, probable traffic and the likelihood of earning a fair return for the investors (in this case, the taxpayers)? There is not the slightest evidence to indicate that such a commission would authorize extensive new railway construction by private capital in competition with existing transportation facilities. On the contrary, the federal government has Co-ordinator of Transportation Eastman and his staff studying the general railway situation, and the Prince plan for consolidating all the railways into a few large systems, for the purpose, among others, of determining whether, and to what extent there is duplication of railway lines and service that can, with economic advantage, be eliminated.

Negation of a "Planned Economy"

Proposed government expenditures upon waterways and highways, which are being pressed with growing vigor obviously constitute the very negation of a "planned economy" in the one industry, transportation, in which a start already has been made with social control of one of its branches, the railroads, to which it is proposed to apply still more "planned economy." If we are not to have planned economy generally in the transportation industry, and investment in highways and waterways is to be continued regardless of public need, then common fairness requires that the railways also shall be unshackled from social control and allowed to adopt, without government interference, whatever methods their managements may deem necessary or desirable to protect the owners of their securities from the effects of the recklessly "planless economy" followed by the government in investing the taxpayers' money in means of transportation to compete with the railways.

Nothing could be more inconsistent and ridiculous or tragic, depending on the point of view, than the government's present policies of applying a "planned economy" to the railroads, involving reduction of duplicated railway investment and facilities, and a "planless economy" to transportation in general, involving a large and wholly unnecessary and economically unsound increase and duplication of transportation facilities by the expenditure of the taxpayers' money.

"Scientific Research"—What and Why?

The railroads have been subjected to criticism for their alleged failure to apply scientific research to the improvement of their physical plant. Much of this criticism has arisen because of a lack of understanding of the nature of the railway industry and a complete failure to appreciate the vast amount of research and engineering investigation which has long contributed, directly and indirectly, to the improvement of railway facilities.

In the light of the wide currency given to these criticisms two developments have recently been announced which are of unusual interest. One is the appointment of a Committee on Research by the Mechanical Division of the American Railway Association to make a preliminary study of all matters referred to it for investigation and research and to formulate a general plan and method of procedure in the case of those projects which it approves. The other is the appointment of a committee by the Science Advisory Board of the National Research Council "to study the matter of scientific research for the railroads in conjunction with the railroad managements and the Co-ordinator's organization and, if it thereafter seems expedient, to formulate a plan for carrying on such research, to assist in the initiation of the project and to advise in connection with its subsequent operation."

What Is "Scientific Research"?

Because of the dramatization of spectacular developments that have come from scientific and engineering research laboratories, the idea of research is being assiduously exploited for commercial purposes. It has,

in short, become the vogue. Every test, investigation or survey, for whatever business objective, is now dignified as a "research," and none is ever anything less than "scientific." The term "scientific research," therefore, has ceased to convey any precise meaning. In the narrow sense, scientific research may be in the field of pure science, devoted to extending the frontiers of knowledge of the universe in which we live, or it may be in the field of applied science, physical or social. Engineering research, or research in applied physical science, may cover anything from a search for practical applications of new scientific knowledge to proof testing of a new machine. Business research may range from a systematic attempt at the development of the principles underlying commercial practice to an estimate of the potential market for razor blades.

The personnel of the committee appointed by the Science Advisory Board would indicate that it and Co-ordinator Eastman, at whose solicitation the committee was appointed, have in mind the field which lies somewhere between pure science and experimental engineering. The list of subjects to which the Research Committee of the Mechanical Division proposes first to devote its attention leaves one in doubt as to whether the main objective of this committee is centralized proof testing of new forms of equipment, or a study of the economic possibilities of some of the more recent applications of new types of equipment and materials on the railways.

Objectives of Industrial Research

Since the railways have been accused of being slower to avail themselves of the advances in science than other industries, it may be interesting to see what application has been made of the results of research by those industries most generally associated with it in the public mind and what this suggests with respect to the railways. These industries are the large electrical manufacturing companies, the automobile industry, and the Bell telephone system.

The electrical industries have, to some extent, engaged in research in the pure science of electricity, the foundation on which their industry is built. They have undoubtedly advanced the frontiers of knowledge in this science. But their efforts have been even more largely expended in the development of practical applications of electrical science which can be manufactured and sold at a profit. No small part of the engineering research of these companies has been and is being devoted to the advancement of railway transportation.

In the automotive field the research work of the General Motors laboratories, which has been held up to the railways as a shining example, has also had as its objective the improvement of products which are manufactured for sale at a profit. Some of these products are in use in railway service. In the case of the telephone system the entire physical plant involves the application of a highly specialized branch of electrical science and the equipment by which telephone service is produced is manufactured under the control of the same corporation which owns the operating companies.

The railroads, like the telephone system, are producers of a service. They have nothing else to sell. But unlike the telephone system, the railroads are not manufacturers of the physical facilities which make up their plant. Furthermore, railway transportation service involves not a highly specialized branch of science to which others are subordinate, but utilizes applications of nearly every branch of engineering science. It would be difficult to say which of these many branches contributes most largely. If, therefore, the railroads are to engage in scientific and engineering research on a scale comparable with that of the industries cited, where shall their activities begin and end?

Railway transportation is but one of many industries in which the new knowledge resulting from research can be applied. The railroads do not sell metals. Shall they undertake the development of metallurgical research in order that they may advance the art of light-weight rolling-stock construction and donate the results of their efforts to the many other users of materials of construction? The railroads do not sell internal-combustion engines. Shall they undertake the development of a light-weight, high-capacity Diesel engine so that the field of internal-combustion motive power can be expanded and donate this valuable development to other industries which could use it to advantage?

Research an Aid to Invention

But if the railways are to engage extensively in scientific engineering research, that alone is not enough. The useful application of scientific knowledge involves invention and invention is not necessarily associated with research. Now, it has never been considered the function of the railways to collect inventors within their organizations and to gamble with them on the fruitfulness of the workings of their imaginations. But industry has always been willing to gamble with inventors whose efforts bear on its own product. By experience, each industry is best able to estimate the probable chances of success of inventions in its own field and so is best fitted to spend money intelligently in the experimental engineering necessary to convert an idea into a useful device or material which can be sold at a profit.

Being users and not producers of physical facilities, the most effective common engineering research activities of the railroads have been devoted to the problems of determining requisites where safety, reliability or interchangeability are involved. There are undoubtedly further useful opportunities for the railroads jointly to co-ordinate and direct the efforts of industries attempting to develop new products for rail-

way use. These are, however, not primarily in the field of laboratory research. They lie more in the study and analysis of operating results by which the requirements of the service may become better known. They may also explore the needs of the service for which there are yet no adequate facilities available and so stimulate invention and engineering development where most needed.

Business Research for the Railways

But this last function involves business research as much as engineering research. In his address before the Railroad Division at the spring meeting of the American Society of Mechanical Engineers at Chicago in June, C. D. Young, vice-president purchases, stores and insurance of the Pennsylvania, proposed this class of centralized research, expanded to include all the business and commercial problems involved in improving and selling railway service. The railways no longer enjoy a monopoly of transportation service with competition confined to that between individual railroads. They must now meet with a united front the competition of other transportation agencies. The needs of this situation, so foreign to customary railroad methods of procedure, certainly present the opportunity for centralized and co-ordinated research in which the technical departments are only incidentally involved.

Much of the work now being done by the Co-ordinator's staff is research of this kind. The broad problems involved in most of the subjects to which the Research Committee of the Mechanical Division proposes first to address itself also require research of this kind rather than engineering research. Since research in industry has been devoted primarily to the improvement and expansion of the products of industry, may it not be well for the railways, through the American Railway Association, to consider their own problems from this angle and plan to undertake and carry on a centralized program of research directed specifically to the improvement and expansion of the only product they have to sell?

Mr. Eastman's request to the Science Advisory Board of the National Research Council, which has resulted in the appointment of a committee of scientists and engineers, all outside the railroad field except for one member from the Co-ordinator's staff, may be considered somewhat in the nature of a challenge to the scientists by the railroads. If the survey of the committee finds useful applications for centralized scientific research to be conducted by the railways, then all interested in the continued improvement of steam railway transportation will be indebted to it. If it finds that the centralized conduct of scientific research by the railways on a large scale will be a useless duplication of the effort now being put forth from hundreds of sources, railroad and industrial, all contributing to the continued development of steam railway transportation, then a troublesome ghost will have been laid.

General Johnson Bemoans High Bus "Taxes"

General Hugh Johnson, head of the NRA, in approving a code for the motor bus industry, took occasion to make some remarks which display his ignorance of one of the fundamental principles of taxation. He expressed sympathy for the "disadvantageous competitive position" of that industry by reason of the fact that "the taxes of its principal competitor, the railroad, have increased but 25 per cent since 1919 as contrasted with a 500 per cent increase in the case of the motor bus industry."

This is the familiar canard, the constant reiteration and acceptance of which is indicative of little less than economic illiteracy. The payments (except net income and property taxes) of the operators of commercial motor vehicles to the government, while they may be taxes in the legal sense, are in reality fees exacted for the use of public property. Such fees exacted from motor bus operators are comparable to the expenditures made by railways to maintain their permanent way and pay the interest upon the investment in it. Corporate net income taxes are the same for all corporations, so it is apparent that their burden is no greater on the bus lines than on the railways. As far as property taxes are concerned, the railways' burden is patently greater, and unjust, as compared with that of the bus lines since many of the latter pay no such taxes at all, whereas railway permanent way, being private property, is taxed while the roadways used by buses, being public property, yield no taxes.

General Johnson, quite apparently, therefore, in referring to increased levies on motor bus operations, had in mind the special charges exacted solely in connection with the use of the highways. Considering the kind of highways we have now as compared with 1919 it is evident that by an increase of only 500 per cent in such levies the bus operators have got a bargain, since a large share—probably a majority—of present-day long distance bus operations would be impossible over highways such as we had in 1919. Just what facility since 1919 has the public provided the railways, compared with what it has done for highway transportation, to justify any increase whatever in railroad taxes? Does General Johnson know whether the increase in levies on the bus industry which he bemoans is in any important degree compensatory for the direct increase in outlays of public funds made necessary to accommodate present-day bus traffic?

We admire General Johnson's virility and his general intelligence, but if he wishes to avoid the "dead cats" which he so abhors, he ought not to throw them himself. We have seen no criticism of him or the NRA as unfair and contrary to the facts as his assertion that bus transportation is disadvantaged in competition with the railroads by inequitable taxation.

What Is the Place of the Freight Container?

New types of freight carriers, for rail-highway co-ordination, are showing promise—Considered important factor in refinement of railway service

IS the merchandise freight, perishable freight or bulk freight container merely a device by means of which reduced rates can be granted to a few favored shippers, the general adoption of which by the railways would merely add to their investment in and supply of surplus freight-carrying equipment? Is the freight container, as a weapon in the competitive struggle between the railways and other carriers, of practical and strategic value only on paper? Or is the freight container, in one or all of its various types, actually well designed to assist the railways in meeting competition for certain types of freight traffic, adapted to their present facilities and operating methods and strongly attractive to shippers of some kinds of bulk and perishable freight and of virtually all kinds of merchandise? In other words, is there a practical or only a theoretical place for the freight container in the freight traffic development program of the railways?

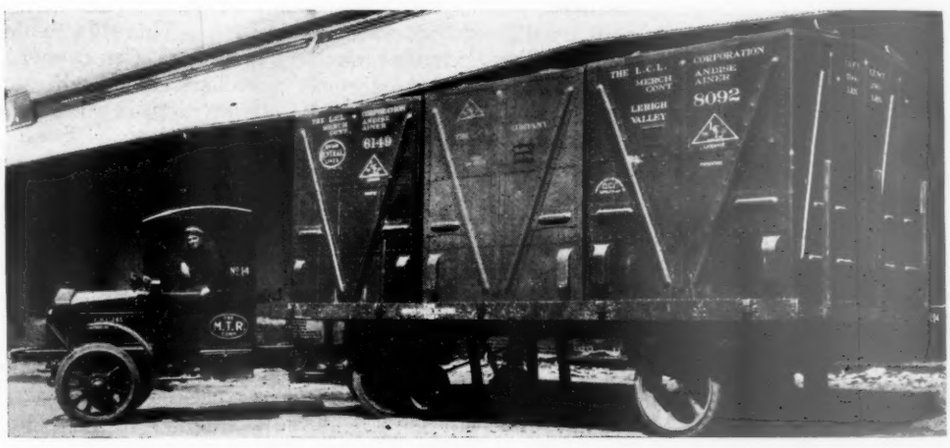
Among the officers of different railways, there are strongly divergent opinions as to the proper answers to these questions. The freight container is looked upon with marked favor by several of the eastern roads which have made and are making extensive use of it as a means of meeting motor truck and, in certain cases, waterway competition. Other railways in the East and still more in other parts of the country have expressed by their failure to make use of it, if in no other way, their skepticism concerning the advantages of providing container service. The rightful place of the freight container in railroad transportation and in the co-ordination of rail and highway transport has been an actively disputed matter for about 10 years, and the dispute still persists.

What is a Freight Container?

First of all, what is a freight container? A box car, of course, is itself a freight container of substantial size, mounted upon its own wheels. The term "freight container", as it is currently used, however, refers to a portable box of steel or other strong construction capable of carrying from 1,500 lb. to more than 10,000 lb. of freight and, by its design and construction, suitable for movement either on a freight car or motor truck and for readily accomplished transfer from the one to the other. In its interior arrangement, in the protection which it offers to its contents from theft and the elements, it is a miniature box car—generally without wheels but, in some forms, equipped with rollers to facilitate its transfer between platform, truck and freight car.

In addition to the larger types of freight containers—those of which a flat or gondola car can carry from 5 to 8—there are smaller containers designed for loading into box cars. There are also still larger containers, called "demountable truck bodies", which load 2 or 3 to the car, and finally there are truck trailers and "rail wagons" which are essentially highway vehicles but which can be transported intact with their loads on railway equipment. All of these are simply freight containers, however, designed to bring about the same results—the improvement of railway transportation for certain types of freight, the greater satisfaction of shippers, the attraction of additional freight to the railways, and the handling of such freight expeditiously and at the smallest possible expense.

Ordinarily, when a shipper uses container service, he loads the container either at the point where it lies upon his platform, or at his door if the container is not removed from the motor vehicle utilized in its terminal transfer. When loaded, the container is trucked to the freight station of the railway where is it transferred by means of a crane, a lift truck, or its own wheels to the car which is to transport it by rail to destination. At the destination station, the container is transferred from



The New York Central, Originator of Modern Container Service, Has Used It Effectively in Meeting Competitive Conditions

the railway car to the truck upon which it is hauled to the door of the consignee.

The freight container is not even a relatively new thing. On the contrary such containers are almost as old as the railways themselves. Their present development, however, had its inception in 1921 when the New York Central first installed container service between Cleveland, Ohio, and Chicago, followed in 1922 by a similar service between Buffalo, N. Y., and New York. Another present user of containers on a large scale is the Pennsylvania, which first established container service between Baltimore, Md., Buffalo, Cleveland, Philadelphia, Pa., Pittsburgh, New York, Rochester, N. Y., and South Kearny, N. J., in June, 1929. Other steam railway users of one or another of the several types of freight containers are the Lehigh Valley, the Central of New Jersey, the Wabash, the Grand Trunk Western, the Alton, the Baltimore & Ohio and the Delaware, Lackawanna & Western. Thus, the present-day container cannot be said to be in the experimental stage, although new improvements and refinements in container service are constantly being developed.

There are several common objections to the adoption of container operation by roads which do not look with favor upon containers. It has been said that, on account of their size, they are suitable for use only by a small proportion of all shippers of merchandise freight, although the variety of sizes of containers now available would appear to overcome that situation. It has been contended that relatively few shippers have container loads of merchandise going from one originating platform to one destination platform, so that the benefits of the container form of freight transportation cannot be reaped by the average merchandise freight shipper, but more largely by freight forwarding companies—this last being considered, by some, an indictment in itself of the freight container. The container has been objected to on the ground that it is not suitable for all merchandise freight traffic so that, to transfer some merchandise adapted to container handling from box cars to containers would leave the still necessary box cars that much less heavily loaded. Objection to the adoption of container equipment has also been voiced on the ground that, when there are already too many box cars, it is no time to add such freight-carrying equipment as freight containers.

Economy and Traffic Development Have Resulted from the Pennsylvania's Operation of Containers

Container Advantages Cited

Those who favor railway provision of container service base their views upon a variety of considerations. It is pointed out that truck transportation has broken down the distinction, especially in rates but also in service, between carload and l.c.l. freight. The container, offering what is virtually carload service and even carload rates for l.c.l. freight, it is said, puts the railways upon a competitive basis with motor trucks in this regard. From the standpoint of the shipper, there are other proven advantages of container service, such as less rigid packing requirements and reduced packing expenses (of importance to such shippers as one in Boston, Mass., who paid $18 for boxing and freight charges for the boxing and handling in ordinary l.c.l. freight service of a shipment, the direct freight charges upon which would have been only $6.50); reduction in loss and damage, and the opportunity to ship in smaller units.

Among the proven advantages of container operation from the railway standpoint are reduced handling expense, with respect to both billing and platform operations; reduced claims on account of loss and damage to shipments; and increased loads per freight car. It is easy to see that there is a reduction in the station expense when consideration is given to the fact that container loads take a single rate regardless of the classification, and there is no necessity, during the time in transit between the point of origin and the point of destination, for any handling whatever of the container's contents. With respect to reductions in claims on account of loss and damage, experience of the roads operating containers has indicated that freight handled by container regularly moves with an almost complete absence of loss or damage of any kind. Increased loading per car is naturally secured when the railway using container service is able to concentrate upon one car, without re-handling of individual shipments, the container-loads received from a number of originating stations, the volume of freight from which is measured in less than carload quantities.

Good Results Indicated

The experiences of individual roads in the operation of freight containers of various types are pertinent in the confirmation which they give of the advantages of container operation. While complete information is not available for publication, certain general results can be stated. There is evidence of the satisfaction of the New York Central with the results of its operation of merchandise freight containers, to meet motor truck competition, in the extent to which this service has been established on its lines. The pioneer in the operation of modern freight containers, this road has concentrated upon container service, to the exclusion of certain other measures, as a means of holding and recovering merchandise traffic subject to highway competition. In 1922, the New York Central moved 68 container cars and 278 containers loaded with 1,436,085 lb. of freight, the revenue on which was $5,701.68. In 1927, the number of container cars handled was 3,999, carrying 10,217 containers loaded with 53,285,372 lb. of freight and earning $154,320.99 revenue. Three years later, the number of container cars handled was 15,700, the

number of containers carried, 47,886, and the number of pounds of freight transported by container, 323,903,813, with $1,116,714.79 revenue. Although container traffic figures for more recent years are not available, there seems to be little doubt that the current container traffic on the New York Central is favorable by comparison with that of the years mentioned. The New York Central, furthermore, has been highly successful in the use of containers for the handling of certain types of bulk freight. Several years ago, by using containers for the handling of brick and road-building materials, it scored a notable victory over river competition for this traffic.

The Pennsylvania, likewise, has showed its satisfaction with the results of its operation of merchandise and bulk freight containers by the extension of this service generally over its system of railway lines. In addition to furnishing container service whereby storedoor-to-storedoor transportation is provided, the Pennsylvania is currently making large use of containers for the movement of small merchandise by this means instead of in ordinary box cars. Instead of loading such shipments in box cars, moving partly filled cars to freight transfer points and then making up solid car shipments, involving re-handling at transfer points and consequent opportunities for damage and loss, the Pennsylvania uses the smaller containers as the carrying unit for ordinary l.c.l. freight, permitting loading for unbroken movement to destination and eliminating transfers enroute. This station-to-station container service has been successful in reducing the time in transit of l.c.l. freight and in reducing also the costs involved in the handling of this business.

The Pennsylvania, in conjunction with connecting lines, has also experimented with the handling of demountable truck bodies on railroad cars. The purpose of this service is to enable the shipper with his own trucks or the trucker of intercity freight to use their highway equipment for the terminal service and to take advantage of the economy of railway transportation in the movement of freight between terminals. Although subject to certain handicaps, this service has brought about the recovery to Pennsylvania rails of a certain volume of business which previously had moved exclusively by motor truck.

The Central of New Jersey and the Lehigh Valley have also expressed satisfaction with their container service. A type of container employed by these roads is of small capacity which can be shifted readily on its own rollers and which is moved in ordinary box cars. Insulated and equipped with refrigerating facilities, these containers have attracted a substantial volume of perishable freight traffic, high class freight which would not move at all if the refrigerated container service were not available.

Other roads report similar success in the operation of standard freight containers, demountable truck bodies or truck trailers equipped for movement by railroad flat car. The originator of the last type of service is the Chicago, North Shore & Milwaukee, a high-speed electric line operating between Chicago and Milwaukee, Wis. In the face of truck competition as keen as that to be found anywhere in the United States, the North Shore Line, following the introduction of its through trailer service, effected the recovery of a substantial volume of traffic. Under this plan of operation, loaded trailers are hauled by truck-tractors from off-line stations to a concentration station, where they are run by means of ramps to the decks of flat cars. On these cars, the loaded trailers are hauled by rail to destination, where truck-tractors pull the trailers from the flat cars and move them without loss of time to the destination station or to the door of the consignee.

There is a Place for the Container

That there is a place for the freight container in the freight traffic development program of the railways seems certain. Whether it will fully occupy that place is still a question. Difficulties over the rates to be charged for freight handled in containers have impeded the development of this service in the past, although these difficulties have now largely been overcome. The container has labored under other handicaps, some of which still persist. Fundamentally, however, it has demonstrated its ability to provide an improved type of railway transportation for merchandise and certain kinds of bulk freight. It offers economy in operation to the railways, justifying the reduced rates which, with expedited service and simplified procedure of shipping, are generally admitted to be attractive to shippers.

This Small Type of Container, Available Under C. N. J. and Lehigh Valley Tariffs, is Moved in Box Cars and Has Been Fitted with Refrigerating Facilities for Handling L.C.L. Shipments of Perishables

As a means of simplifying the transfer of freight from railway train to motor vehicle, thereby contributing to the smooth co-ordination of railway and highway service, the container merits full consideration and the open-minded study of the railways. Further experiment in the design and in the operation of freight containers may be necessary. The result, in improvement of railway transportation and in the restoration to the railways of competitive traffic, should be worth while. As stated by the Interstate Commerce Commission in its container rate decision in 1931, "We do think, because of the merits inherent in the container itself, the promises which it holds for effective competition with transportation by truck, and the transportation economies which evidently can be developed with more extensive use of the container, that the use of the container may well be encouraged."

Light-Weight Railroad Equipment*

A review of economic reasons for present standards of car size and weight—Progress being made towards weight reduction

By F. G. Gurley

Assistant to the Vice-President, Chicago, Burlington & Quincy, Chicago

CONTRARY to what might be assumed from recent articles in the daily press and various magazines, the weight of railroad equipment is not something which has failed to receive attention in the past. A hundred years ago Jonathan Knight, chief engineer of the Baltimore & Ohio, made a study of freight equipment and concluded that the proper ratio of weight between a car and its lading was one to three. We have not always realized Jonathan Knight's ambition but the railroads and the car builders have always had in mind the undesirability of unnecessary weight. One thing is certain, no one ever has added weight without being convinced that it was justified—all things considered.

Much Criticism Not Based on Facts

No one can complain about fair criticism based on facts, but all too frequently the facts are not established. Typical of such articles criticising railroads is one in the November issue of Scribner's magazine, entitled "The Railroads—Old Soldiers of Industry." The author did not sign his name but he says, in part:

> Despite the object lesson of conservative British railroads using smaller and lighter equipment for both passengers and freight, our managers have steadily increased sizes and weights during a period when average loads were declining. The Royal Scot, with 55 per cent of the weight of the Broadway Limited, could handle the latter train's usual pay load of from thirty to forty people with comfort. The same is true of freight. The spread of industrial establishments throughout the country, together with hand-to-mouth merchandising and inventory policies, has reduced the average haul and the average load to such an extent that box cars today carry about half their rated capacity and are spending an increasing proportion of their service life in yards and terminals. * * *

Let us examine the facts: The London, Midland and Scottish exhibited the Royal Scot in Chicago this year. It is a beautiful train, an example of splendid workmanship. I quote, however, from a pamphlet issued by this company entitled "A Comparison."

> One feature which always attracts the attention of American and Canadian travelers when comparing British railway trains with those of their own continent is that, although the rail gage is the same, there is a noticeable difference in the respective heights and widths of British and American passenger cars, while the locomotives of the North American continent are also considerably larger than those employed in Great Britain.
>
> The comparatively modest dimensions of British locomotives and rolling-stock are dictated by the permissible limits of width and height, which in the case of the Royal Scot are 9 ft. 3 in. and 12 ft. 9½ in., respectively, compared with typical dimensions of 10 ft. wide and 15 ft. high in the United States.
>
> Unlike the railways of the United States and Canada, the British railways had to purchase the whole of their right of way from private landowners, with the result that the immense investment operated to restrict the area purchased to the limits required by design as then understood. In consequence, the bridge, tunnel and other clearances of these early tracks set the physical limits which have still to be observed in building the latest type of locomotive.
>
> Furthermore, while the size of the earlier freight cars was largely based on that of the tramway "chaldron" coal wagons, the original railway passenger cars were built similar in size to the private horse-drawn coaches and stagecoaches of the period. Indeed, the tunnels and other structures on the Liverpool & Manchester Railway of 1830 ("the oldest firm in the railway passenger business"—now part of the L. M. S. system) were constructed just large enough to permit the passage of a private coach loaded on to a railway flat-car, a practice much in vogue on the early railways.
>
> The standard freight car on British railways is rated at 12 tons capacity, although a limited number of 20-, 30- and 40-ton cars, suitable for special types of traffic, are in use.
>
> The Royal Scot locomotives may fairly be said to represent the consummation of a century of progress in the design and construction of locomotives, within the physical limits imposed by the British height-loading-gage, which is, of course, considerably smaller than that obtaining in the American continent, and has restricted the expansion of locomotive dimensions accordingly.

This clearly shows the underlying reason for the difference in size of British and American trains. The inference is that British railroad officers regret their inability to expand. The Royal Scot cars have a steel underframe but a wood body. I shall comment later about the policy and attitude of the railroads of this country with reference to all-steel passenger equipment which weighs more than wood or part wood cars.

Average Load per Car Freight Increases Even During Period of the Depression

Note that the standard freight car on the British railways is of 12 tons capacity. The average load per car of revenue freight originating in the United States was 34.48 tons in 1920. Strange as it may seem, considering the much discussed hand to mouth buying we find that in 1931, after two years of declining business activity, the average was 35.38, or 2.6 per cent more than it was eleven years previous. In the same period of time the average haul in the United States increased from 303.52 to 329.23 miles, or 8.5 per cent. The article in Scribner's magazine stated the average haul and the average load had decreased. The average capacity of all freight cars in this country was 47 tons in 1931, which is the last year for which I. C. C. statistics are available. With an average load of more than 35 tons per car it is inconsistent to suggest that we consider British equipment a criterion when their standard is a 12-ton car, particularly in view of the great distances in America and the long average haul.

It seems to me that when we consider freight cars we must keep in mind the circumstances underlying the transportation problem during the development of our country, and also existing conditions. There was a constant and growing demand for the movement of large quantities of grain, coal, supplies, and materials from one place to another. It was soon demonstrated that the unit of sale or purchase was larger here than in

*Abstract of a paper presented before the Western Railway Club, Monday evening, November 20, at the Hotel Sherman, Chicago.

Europe. Cars were built to meet that requirement. Students of transportation were quick to realize the economy in moving as many freight cars in as few trains as possible. The first urge, therefore, was to get a powerful engine; the next was to build a car strong enough to stand the shocks and strains incidental to the longer freight train. It is one thing to build a car to be moved all by itself but quite another thing to build one to be a part of the ever increasing freight train. So that process went on and on.

Wood was the material used for the early cars as it was for the earlier buildings. The so-called "all wood" freight cars did fairly well when the trains were not too long, but finally steel center sills were necessary, quickly followed by steel underframes, steel frames, and then the all-steel car. First cost and weight were somewhat in proportion to the amount of steel used, and maintenance costs were correspondingly reduced. Sills of wooden cars were all too frequently broken in road service, in many instances necessitating transfer of the lading. Drawbars and draft gears were damaged making it necessary to set out cars at intermediate terminals. In fact it was necessary to maintain car repair forces at practically all intermediate terminals. With the advent of the stronger car all of this changed. It was found practicable to discontinue the car repair forces maintained at these intermediate terminals. This resulted in substantial operating economies and the public benefitted greatly by reason of the fact that it was seldom necessary to transfer the lading. The delays on account of bad orders were very substantially reduced.

Important Changes in Passenger Equipment

Dealing now with what has been done, is being done, and the probable trend, I shall speak first about passenger equipment.

Some years ago the Burlington became interested in reducing the weight of its branch-line and secondary main-line passenger trains by substituting gas-electric motor cars for the old equipment and the almost obsolete small steam locomotive. These motor cars were constructed of ordinary carbon steel and the one-car unit which we use in most instances weighs about 60 tons. The weight of the equipment replaced, including the locomotive and ordinarily two cars, was about 210 tons. It is true that the one-car unit did not provide as much carrying space as the equipment it replaced but, nevertheless, it was sufficient for all of the business offered to us. We have been and are operating approximately 3,500,000 train miles per year with motor equipment of this type, which is about 27 per cent of our total passenger train miles.

Passenger equipment must be safe, comfortable and attractive in appearance. Some cars of wood or part wood are in service, but as these cars are retired they are replaced with cars constructed of metal, and, in the past, ordinary steel has been the only known metal considered suitable for such purposes. Within the past few years, two new metals adaptable to railroad service have been developed by the metallurgists. These are the strong alloys of aluminum, and stainless steel.

There are differences of opinion as to the comparative merits of these two newly developed metals, but it is not my purpose tonight to enter upon that controversial field. You should keep in mind, however, that ordinary carbon steel commonly used in the construction of railroad equipment costs about 2 or 3 cents per pound, while both aluminum and stainless steel cost about 35 cents per pound.

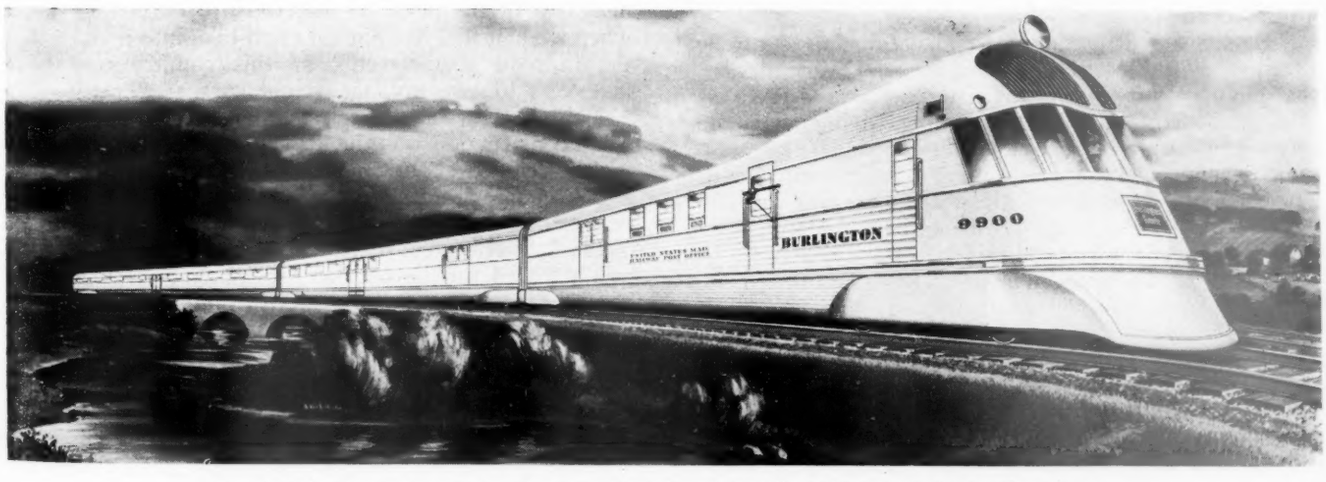
Unquestionably, the two passenger trains which have attracted most attention are the Union Pacific's aluminum train, being constructed by the Pullman Car & Manufacturing Corporation, and the Burlington's stainless-steel train, being constructed by the Budd Manufacturing Company, of Philadelphia. These two trains consist of three cars each, include space for mail, baggage and express, also a buffet section, utilize these improved metals to the greatest possible extent and in addition are streamlined. They are, therefore, designed for high-speed operation.

Rail Service Must Be Geared to Tempo of the Times

The modern automobile on the improved highway and the airplane have materially changed the ideas of people with reference to the time required to go from one place to another. In the railroad fraternity I think there is not complete agreement about speed. I believe operating men generally prefer speeds in the lower brackets, but, whether we like it or not, I fear we are geared to the tempo of the times, and that tempo does not now indicate any slackening in passenger train speeds.

Streamlining has yet to be proved in actual railroad service, but wind-tunnel tests we had made at the Massachusetts Institute of Technology indicate we will receive distinct benefits. This is especially true at higher speeds. Streamlining, therefore, along with reduced weight, is expected to be very helpful in operating at increased speed with minimum expenditure for power.

The air brake equipment used in ordinary train service was not considered suitable for our streamline train.



An Artist's Conception of the Burlington High-Speed Articulated Train Now Under Construction

We will use the so-called SME schedule of the Westinghouse Air Brake Company. This is a straight-air system using 100 lb. brake-cylinder pressure. It differs from the normal straight-air system in three respects: (1) It has definite automatic safeguards; (2) in case it is necessary to tow this new equipment the brakes are applied in the same manner as the brakes of the train in which the equipment is being handled; (3) to prevent sliding wheels a so-called retardation controller is utilized, the purpose of which is automatically to reduce brake cylinder pressure as the speed is reduced, should the engineman fail to do so.

A Few Facts About Stainless Steel

The Burlington's train is to be constructed of stainless steel, and we find that there is not a general knowledge of that metal. Stainless steel is non-corrosive and does not require painting even when exposed to the elements. The strength of stainless steel is materially increased by cold working and, after being cold-rolled, possesses a tensile strength approximately three times that of carbon steel ordinarily used in railroad car construction. It is sold under the following trade names: "Allegheny Metal," by the Allegheny Steel Company; "Enduro," by the Republic Steel Company; "U. S. 18-8," by the United States Steel Corp.; "Rezistal," by the Crucible Steel Company.

The weight of stainless steel and ordinary carbon steel is about the same, i. e., 490 lb. per cu. ft., but by reason of the high tensile strength of this material and because thin sections may be used without fear of corrosion, it is possible to construct a train weighing substantially less than a train constructed of carbon steel ordinarily used in railroad passenger equipment.

A vital element in the construction of a stainless-steel train is the so-called shotwelding system by which, under conditions of ordinary current control, a spot weld which does not break down the surface of the metal is produced almost instantaneously, thus allowing it to remain corrosion-resistant.

Different types of trucks are another interesting development to further reduce the weight of passenger equipment. Principal among the new designs are the rubber-tired truck and the articulated truck. The Union Pacific and the Burlington trains both employ the four-wheel articulated truck, which, as the name implies, is a truck supporting the ends of two adjoining cars. The articulated truck changes the unit from a car to a train because it is not practicable to add or take away a car from a train equipped with articulated trucks. With the four-wheel articulated truck the weight per wheel is in excess of the present maximum of 2,400 lb. recommended for pneumatic tires.

To secure the maximum weight reduction, many fields were explored. Our chair-car seat weighs 65 lb., which is only one-third as much as the weight of the seat in our Aristocrat chair car. Striking savings were made by a new insulating material. Other similar studies, too numerous to mention, were made. To increase the comfort of our passengers, however, we added air-conditioning equipment. This cost us about 3,750 lb.

When we were considering the economies and advantages of various types of equipment to be utilized in the service to which our new streamlined stainless-steel train will be assigned, we naturally studied alternative plans. The equipment now used, including a 4-4-2 steam locomotive, weighs 809,000 lb. We estimated that a three-car train of normal contour, constructed from the usual carbon steel, including an internal-combustion power plant suitable for the weight and schedule, would weigh approximately 530,000 lb. For the streamlined stainless-steel train, including the 600-hp. Diesel-electric power plant, we estimated that the train would weigh only 180,000 lb. The cost of our new train is in the $200,000 zone, and the cost of the ordinary carbon-steel train with the larger internal-combustion power plant necessary to make the proposed schedules was estimated to be approximately the same. Our estimates showed we would have the lowest train-mile cost with the equipment and power we are utilizing in our new train. The maximum height of the new train is 12 ft.-¼ in., over the power plant. Behind this region the height is approximately one foot less. The height of the usual car is 14 ft.-2 in.

A comparison of the deadweight per passenger for Burlington equipment of various types is shown in the table.

Deadweight per Passenger for Burlington Equipment of Various Types

Wood suburban coach built in 1884. (Of course these cars are no longer in service)	850 lb.
Steel suburban coach in service today	1,000 lb.
70-ft. wood coach with vestibules and six-wheel trucks for road service	1,400 lb.
70-ft. all-steel coach	2,000 lb.
Aristocrat type chair car	2,380 lb.
DeLuxe stainless-steel chair car including the parlor car section where additional space is allowed	750 lb.

In our stainless-steel chair car we have 38-in. seat spacing, which is about 5 in. more than in our suburban coaches. I mention this to indicate that the comfort of passengers has been kept constantly in mind in designing and building this train.

There are, of course, possibilities of securing a reduction in the weight of passenger cars by ingenious design with ordinary carbon steel. The cost of such cars will no doubt be less than the aluminum or stainless-steel cars, but the weight undoubtedly will be greater and that, of course, necessitates more power.

Still Need for Help from the Metallurgist

The fact should be stressed that the railroads are more than anxious to secure further help from the metallurgist. His part is more important than the general public realizes. We must have metal for our car construction and that metal must be available at a low price. Price is a dominant factor in determining to what extent lighter weight or stronger metals shall be used. Obviously weights can be reduced by the use of either a lighter or a stronger metal. Unfortunately, today the railroads have a quite limited choice offered them by the metallurgists. Ordinary carbon steel with a tensile strength of about 50,000 to 65,000 lb. per sq. in. costs about two or three cents per pound. Any alloy steel available today suitable for car construction, costs substantially more than this. These heavy percentage increases in the price of material are exceedingly vital when we consider freight cars and take into account that the railroad requirements of this country necessitate in excess of two million freight cars.

I think that, in general, the largest box car of all-wood construction was the 40-ft., 80,000-lb. capacity car, which weighed about 17 tons. After steel underframes and steel side frames were applied to that car it weighed between 21 and 22 tons, or an increase of 29.4 per cent incidental to the steel reinforcement, which reinforcement was actuated for the reasons previously given. A 40-ft. box car of 100,000-lb. capacity similarly constructed weighs one or two tons more. Recently there have been constructed at the Pressed Steel Car Company, Pittsburgh, Pa., some 40 -ft., 100,000-lb. capacity box cars equipped with steel underframes, steel ends and steel side frames. These cars were designed by the American Railway Association and in the design careful thought

(*Continued on page 758*)

Dismantles Historic Bridge of Obsolete Design

Bollman truss span constructed by Baltimore & Ohio across a mill race at Harpers Ferry, W. Va., is scrapped after nearly 70 years

By P. G. Lang, Jr.

Engineer of Bridges, Baltimore & Ohio, Baltimore, Md.

WITH the dismantling of the Bollman truss span carrying a Baltimore & Ohio track across a mill race on a spur to the Harpers Ferry Electric Light & Power Company's plant at Harpers Ferry, W. Va., there vanished another link between the present and the historic past of the railroads and the nation. While the removal of such antiquated structures is an inevitable concomitant of railroad progress, of the introduction of heavier engines and cars, and, as a necessary corollary, of bridges designed to sustain the greater loads thus imposed, this old span, which so well represents the structural practice of an earlier day, is an object of interest which merits passing comment.

On December 1, 1834, about 32 years before the bridge with which this article deals was constructed, the western terminus of the Baltimore & Ohio was established at a point on the northern bank of the Potomac river, opposite Harpers Ferry. Catoctin ridge and the Potomac river constituted physical obstacles to its further progress, and a legal barrier existed in the shape of property rights held by the United States Government incident to its ownership and operation of an arsenal which then occupied a broad strip of land on the southern shore of the river, extending squarely across the projected route of the new railroad.

The government arsenal at this point owed its origin to the Nation's first president, and, upon the recommendation of George Washington, the necessary land was acquired and the operation of the plant commenced in 1796. Between that period and the outbreak of the Civil War, in 1861, this plant continued to fulfill the office for which it was designed, namely, that of furnishing weapons for the United States Army. During the night of October 16-17, 1859, it was forcibly seized by a group of anti-slavery radicals, under the leadership of the famous John Brown, and remained in their possession for several days, until their subjugation and capture by combined forces of United States marines and Virginia militia. During the evening of April 18, 1861, the federal garrison stationed at Harpers Ferry evacuated that point, after partially dismantling the arsenal.

Due probably to the exposed position of this area during the succeeding four years of war, in the course of which its possession constantly shifted with the vicissitudes of the struggle, the activities of this plant as an arsenal were never resumed, although the property remained in the hands of the government until after the close of the conflict. Subsequent to 1865, the government sold its rights to the Harpers Ferry Power & Manufacturing Company, and the area has since been utilized for industrial purposes.

In common with many plants of the early ninteenth century, the arsenal made use of water as a source of energy for the operation of its power-driven appliances, and, to that end, a canal was constructed for the conveyance of the requisite water from the Potomac river. Incident to the construction of the Baltimore & Ohio line through the arsenal area, a crossing of this canal-race was necessary and occupied an important place in the negotiations. After numerous conferences between representatives of the United States Government and the Baltimore & Ohio, during 1836, 1837 and 1838, a mutually satisfactory arrangement was devised, and this, including the canal crossing, was made the subject of an agreement dated November 5, 1838, which was signed on behalf of the government by Joel R. Poinsett, then secretary of war, and on behalf of the Baltimore & Ohio by Louis McLane, then its president.

Original Structure of Wood

The original structure crossing the mill race, which was built in 1839, consisted of wooden trusses and was situated on what was then the main line of the railroad. While no records or plans are available at this time to indicate the exact character of the bridge, it is reasonable to suppose that the trusses were of the type developed during 1838 by Benjamin W. Latrobe, then chief engineer of the Baltimore & Ohio, an outstanding example of which was to be found in the bridge carrying the Baltimore & Ohio tracks across the Patapsco river at Elysville (now Alberton), Md. This latter

The Bollman Truss Span on the Paper Mill Spur at Harpers Ferry. Built in 1866

bridge consisted of two spans, each 150 ft. in length built of American white pine. It is also probable that, in the design and construction of the bridge crossing the canal race at Harpers Ferry, use was made of the expert knowledge and facilities of the noted bridge builder Lewis Wernwag, who, between 1824 and 1843, operated a plant on Virginia Island in the Potomac river at Harpers Ferry, where timber for use in bridges built to his designs was prepared and framed.

During the decade between 1840 and 1850 the iron bridge began to acquire popularity as a railroad structure, and, in 1851-2 the westernmost span of the Potomac River bridge at Harpers Ferry was rebuilt in iron to the designs and under the supervision of Wendel Bollman, then master of road of the Baltimore & Ohio. What is believed to be this original span is still in use as part of a highway bridge. Early in 1863 the remainder of the main spans in the Potomac River bridge were rebuilt in iron, to Bollman's designs, but incident to the Gettysburg campaign the entire structure was demolished shortly thereafter. Between that period and the close of the war in 1865, the Potomac River bridge existed as an improvised structure. Between 1865 and 1870 those spans which had been demolished during the war were rebuilt to Bollman's designs as permanent iron spans and the installation of a metallic span at the canal-race crossing was apparently included in this project.

Final Structure Built in 1866

The span used for the mill-race structure was built about 1866, probably at the bridge shop of the Baltimore & Ohio at Mount Clare (Baltimore), Md. Its design was that originated by Mr. Bollman, who had resigned from the Baltimore & Ohio organization in 1858 to engage in private practice and in the manufacture of iron bridges built to his designs.

The iron span installed at the race crossing continued to serve its purpose until April, 1894, when the second of the Potomac River bridges at Harpers Ferry and extensive line changes introduced in conjunction therewith were opened to traffic. With this change, the section of track on which the race crossing was situated ceased to be a part of the main line, and its function became merely that of a spur into the plant of the Harpers Ferry Paper Company, subsequently the Harpers Ferry Electric Light & Power Company. As a part of this commercial siding, the Bollman truss span at the race crossing continued to serve its purpose for about thirty years longer. With the partial destruction of the paper company's plant by fire in 1924, and the subsequent change of activity at this point to hydro-electric production, the utility of this bridge ceased, and it was dismantled during the present year.

Long Life Due to Wrought Iron

This iron span was an excellent example of Bollman design and mid-Nineteenth Century workmanship. It was a double-track bridge of the through type, 156 ft. in length. The wrought iron used in its construction is a substance whose resistance to the deteriorating effect of the elements is well known, and thus this interesting example of early structural metal survived the vicissitudes and wear of nearly seventy years. Its abandonment was due to no inherent error in design or defect of material or workmanship, but solely to the change in the character of motive power and rolling stock through the years since its construction. In fact, the condition of the material in this bridge when it was dismantled in 1933, after serving for more than 60 years as a carrier of railroad traffic, was, to all appearances, as good as at the time of the construction of the bridge 67 years before.

An interesting and relevant deduction from a comparison of this old Bollman span with types which have since become current, including the modern Warren and Pratt trusses, is that progress in structural design has been continuously in the direction of symmetry and simplicity. The Bollman span is, in substance, an aggregation of independent trusses, one of which is represented by each panel, and the top chord is the sole member common to the entire span. By contrast, a modern railroad bridge truss, of any current design, usually of a magnitude many times that of this early prototype, is so devised that its action is that of an integral and homogeneous unit, each part of which functions in accurate co-ordination with other parts and of the perfect whole.

Light-Weight Railroad Equipment

(*Continued from page 756*)

was given to the question of weight. As a result, the weight was reduced about 10 or 12 per cent. Two of these cars are now at the plant of the Pullman Car & Manufacturing Corp. to undergo load and impact tests. I think it may safely be said that these cars represent the latest thought with reference to box cars constructed out of material available within the price range heretofore considered feasible for freight car purposes.

Probably the greatest use of aluminum in freight cars was in the construction in 1931 of ten 70-ton hopper cars with bodies made of aluminum. These were constructed by the Alcoa Ore Company which is a subsidiary of the Aluminum Company of America. Approximately 12,500 lb. of aluminum plates were used in each car and a total weight reduction of about 35 per cent was accomplished.

Improvement in Steam Locomotives Also Planned

No paper about rail transportation is complete without paying a tribute to the steam locomotive. We have demanded a locomotive powerful enough to pull increasingly heavy trains at higher speeds. We have desired an engine capable of operating through intermediate terminals without change and of giving us very high mileage between general shoppings. All of these results have been obtained. With the trend toward light weight we find that, by the use of improved metals, the locomotive is making its contribution. Nickel-steel boilers and cast-steel cylinders are perhaps the most noteworthy examples of the weight reductions so obtained.

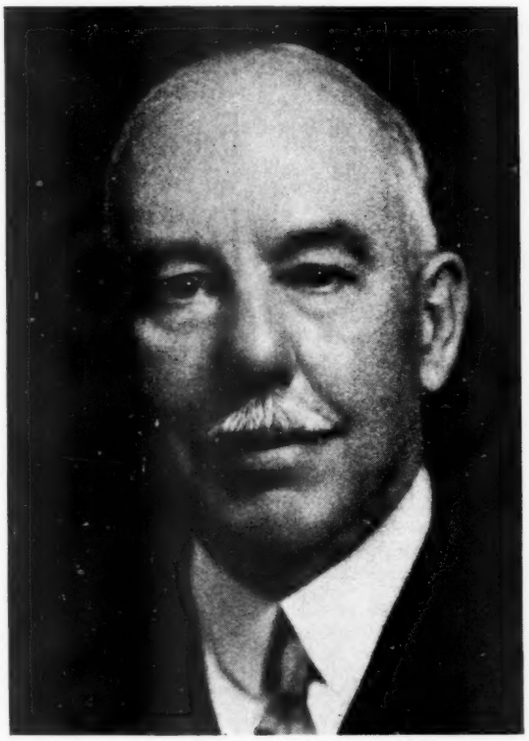
There has always been some question as to the exact dividing line between the service which can best be performed by the internal-combustion or the steam engine. The smaller crew incidental to the small internal-combustion engine has been an important factor in its favor. I have, however, been very much impressed with some of the presentations made to us by steam locomotive builders with reference to the possibilities of light-weight high-speed streamlined steam locomotives. The locomotive builders contemplate the use of high-tensile boiler plate, and cast steel instead of cast iron, also alloys and other light-weight material at points which justify change, as well as high steam pressure.

Out of it all, I am certain that the American railways and American railway equipment manufacturers will be successful in finding a satisfactory solution to this problem of the economic weight of railroad equipment.

Henry Herman Westinghouse Dies

Chairman of the board of directors of the Westinghouse Air Brake Company was in his 81st year

HENRY HERMAN WESTINGHOUSE, chairman of the board of directors of the Westinghouse Air Brake Company and a director of the Union Switch & Signal Company and of the Westinghouse Electric & Manufacturing Company, died on November 18 at his home in Goshen, N. Y. Mr. Westinghouse's death came after a prolonged illness resulting from a fall in December, 1932; he was in his 81st year.



Henry Herman Westinghouse

Mr. Westinghouse, who was one of the country's leading business executives, an outstanding mechanical engineer and inventor of many devices in connection with air brakes and steam engines, was born November 16, 1853, in the village of Central Bridge, Schoharie county, N.Y., and was the youngest of seven brothers in a family of ten children. Inheriting a genius for mechanical development from his father, who was a patentee and manufacturer of agricultural machinery, Mr. Westinghouse began his engineering career as an assistant in his father's shop. Destined to work hand in hand with an elder brother, George, who invented the air brake and founded the Westinghouse industries, Henry Herman received his early education at Union High School, Schenectady, N. Y., being graduated in 1870. In 1871 he entered Cornell University, taking up the study of mechanical engineering. In 1872 he went to Pittsburgh, Pa., to become identified with the business of the Westinghouse Air Brake Company, organized and incorporated in 1869.

He worked successively in the foundry, machine shop and drafting room, and occupied the positions of general agent, general manager (1887) and vice-president (1899), succeeding to the presidency in 1914, on the death of his brother, George; in 1915 he became chairman of the board of directors. Although not in recent years actively engaged in the management of the company, he still retained an interest in its operations and exerted a notable influence in shaping its policies.

In addition to his close association with the development and evolution of the air brake, H. H. Westinghouse, like his brother George, was quick to sense the mechanical needs of the hour and in the late 'Seventies patented and developed the Westinghouse single-acting steam engine, which was an important factor in the success of the electric power industry. So successful was this new source of power, that in 1881 he organized the Westinghouse Machine Company to manufacture the engine. In 1885, in association with William L. Church, Walter C. Kerr and I. H. Davis, he formed the engineering firm of Westinghouse, Church, Kerr & Co., and was its president for many years. This company marketed the Westinghouse single-acting engine in every country of the world where steam power was used.

To the many patents issued, covering developments in air brake design, construction and operation, H. H. Westinghouse made numerous important contributions. These, together with his accomplishments as a designer of machinery, won for him an enviable standing among the leading mechanical engineers of his day. Besides his mechanical talents, Mr. Westinghouse also possessed marked executive ability, as is evidenced by a record of sixty years' association with the Westinghouse Air Brake Company. He was among the first to recognize the importance of employee welfare and adopted many beneficent measures in their interest. In addition to positions mentioned above, Mr. Westinghouse was a director and chairman of the board of the Canadian Westinghouse Company, Ltd.; director and president, Compagnie des Freins Westinghouse, Paris, France; and director of Westinghouse Brake & Saxby Signal Company, Ltd., London, Eng.; the Westinghouse Brake Company of Australasia, Ltd., Sydney, Australia, and the Westinghouse Brake Subsidiaries, Ltd., London.

Among the clubs and societies of which he was a member, were: The American Society of Mechanical Engineers; the American Academy of Political and Social Science and the American Society for the Advancement of Science, of which he was elected a fellow in 1925. He was a member of the Chamber of Commerce of the United States and of the National Industrial Conference Board, Inc., and was a trustee of Cornell University and of Rollins College.

CLAIMS RESULTING FROM LOSS AND DAMAGE to freight shipments paid in the first six months of 1933 by the Class I railroads of the United States and Canada were less than in any corresponding period since 1904, according to reports received by the Freight Claim Division of the American Railway Association. Claims paid in the first half of 1933 amounted to $7,635,282, a reduction of $2,675,442 or 25.9 per cent under the same period in 1932, and a reduction of $6,521,844 under the same period in 1931. Substantial reductions were reported in the amount of claims paid from all causes except robbery of other than entire packages, which showed an increase. On the basis of the total number of cars loaded with revenue freight, loss and damage claims paid by the railroads in the first six months of 1933 averaged 58 cents per car, compared with 73 cents last year.

Records Show Value of Water Treatment

By E. L. E. Zahm*

SINCE the inauguration of a comprehensive water treatment program on the Missouri-Kansas-Texas about ten years ago, locomotive mileage has increased until at present a number of passenger locomotives are averaging more than 400,000 miles between shoppings. Four of these engines that have a combined total of 1,643,742 miles since the last shopping have just been returned for repairs. In detail, the mileage records of these locomotives follow:

No. 371	450,365
No. 379	394,310
No. 389	372,185
No. 412	426,882

More than 80 freight locomotives have 100,000 miles or more to their credit, while a number of heavy freight locomotives have records exceeding 200,000 miles and a few approaching 300,000 miles.

Prior to the installation of the water treating plants and the centering of responsibility for their operation and control, locomotive boiler failures occurred at the rate of one for every 40,000 to 90,000 locomotive miles. From 1924, when the major portion of the water treatment program was completed and most of the plants were in service, the number of failures has steadily decreased as evidenced from the record appearing below:

Year	No. of Failures	Eng. Miles Per Failure
1918	316	50,500
1919	219	83,300
1920	359	55,200
1921	220	77,300
1922	580	44,300
1923	168	89,000
1924	35	415,000
1925	16	890,000
1926	7	2,027,000
1927	6	2,315,000
1928	3	4,708,555
1929	4	3,477,743
1930	2	6,175,960
1931	1	11,253,921
1932	2	5,178,888

Recently, the M-K-T Lines have been allowed extensions on tube and flue renewals by the Bureau of Locomotive Inspection of the Interstate Commerce Commission on approximately 22 per cent of the total number of locomotives now in service.

The fuel consumption records are equally corroborative of the economy of water treatment. In 1923 passenger service required 1.21 gal. of fuel oil per car mile, while in 1931 this figure was reduced to 0.85 gal. A reduction of 31 per cent in fuel consumption has also been obtained in freight service, while in switching service this decrease amounts to 21 per cent. The figures in the table show the rates of fuel consumption during the period from 1920 to 1931, and the effect of water treatment is indicated by the sharp reduction occurring in 1924, the first year in which the water treating plants were operated a full 12 months.

Year	Passenger Gal. Per Car-Mile	Freight Gal. Per 1000 GTM	Switch
1920	1.23	15.2	12.7
1921	1.15	13.5	13.0
1922	1.17	13.5	12.2
1923	1.21	12.8	12.7
1924	1.09	11.0	11.9
1925	1.02	9.8	11.3
1926	.94	9.4	10.6
1927	.92	9.4	10.5
1928	.92	9.4	10.6
1929	.88	8.9	10.4
1930	.86	8.8	10.2
1931	.85	8.8	10.0

There are 72 water treating plants of various types in service on the M-K-T Lines. These plants are all of the continuous type and vary from straight soda ash dosage to the complete lime-soda ash, sodium-aluminate treatment. During 1932 a total of 1,145,574,000 gal. of water was treated and 1,693,838 lb. of incrustants were removed.

The water treatment program was inaugurated and has been carried on by J. H. Davidson, water engineer, under the direction of Frank Ringer, chief engineer, and K. H. Hanger, engineer maintenance of way. Mr. Davidson is assisted in the control of the plants by W. R. Anthony, inspector, and the writer.

* Treating plant chemist, Missouri-Kansas-Texas Lines.

Freight Car Loading

WASHINGTON, D. C.

REVENUE freight car loading in the week ended November 11 totaled 577,676 cars, a decrease of 30,109 cars as compared with the week before but 40,989 cars more than the total for the corresponding week of last year, which included the national election day holiday. This was, however, a decrease of 112,284 cars as compared with 1931. Loading of forest products, coal and live stock showed increases as compared with the week before and loading of miscellaneous freight, grain and grain products, forest products, ore, coal and live stock showed increases as compared with last year. The summary, as compiled by the Car Service Division, American Railway Association follows:

Revenue Freight Car Loading

Week Ended Saturday, November 11, 1933

Districts	1933	1932	1931
Eastern	124,502	116,685	149,981
Allegheny	108,253	97,920	134,932
Pocahontas	39,404	37,859	43,854
Southern	84,671	81,396	103,141
Northwestern	70,365	61,139	79,611
Central Western	99,381	88,524	112,393
Southwestern	51,100	53,164	66,048
Total Western Districts	220,846	202,827	258,052
Total All Roads	577,676	536,687	689,960
Commodities			
Grain and Grain Products	28,030	25,104	37,983
Live Stock	21,877	18,303	27,587
Coal	121,071	113,608	130,473
Coke	5,733	4,093	5,636
Forest Products	23,661	15,968	22,871
Ore	7,451	2,795	6,614
Mdse. L. C. L.	165,636	169,579	207,464
Miscellaneous	204,217	187,237	251,332
November 11	577,676	536,687	689,960
November 4	607,785	587,302	717,048
October 28	636,674	617,284	740,363
October 21	650,482	641,985	769,673
October 14	664,058	649,690	761,596
Cumulative total, 45 weeks	25,214,825	24,630,729	33,164,165

The freight car surplus for the last half of October averaged 385,137 cars, an increase of 8,319 cars as compared with the first part of the month. The total included 227,761 box cars, 110,730 coal cars, 18,663 stock cars, and 9,796 refrigerator cars.

Car Loading in Canada

Car loadings in Canada for the week ended November 11 totaled 47,442 cars, a decrease of 3,246 cars from the previous week but an increase of 3,166 cars over the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
Nov. 11, 1933	47,442	17,955
Nov. 4, 1933	50,688	19,529
Oct. 28, 1933	49,502	19,282
Nov. 12, 1932	44,276	17,345
Cumulative Totals for Canada:		
Nov. 11, 1933	1,754,445	829,610
Nov. 12, 1932	1,912,802	853,279
Nov. 7, 1931	2,244,179	1,135,953

Railways Answer Eastman's Questions on Legislation

Ask that all forms of transportation enjoy equal opportunities of competition

WASHINGTON, D. C.

CO-ORDINATOR Eastman recently announced through the press his desire to elicit from interested shipper and trade associations, organizations of transportation agencies, boards of trade, chambers of commerce, etc., and individuals, such comments, together with pertinent factual data, as they might care to make on any or all of a series of 27 questions relating to federal transportation legislation. The questions were published in the *Railway Age* of November 11. The Association of Railway Executives has prepared its answers to the questions as indicating the position taken by the railways. Without repeating the questions, except where it may be necessary to make the answer clear, its replies to the queries are as follows:

A—Regulation of Competing Forms of Transportation

1—Inequality of opportunity is unfair. Rail, motor and water transportation should enjoy equal opportunities of competition, not only in so far as federal regulation is concerned, but otherwise. Equal opportunities in competition include fair treatment in the matter of regulation, of taxation and of being required to furnish their own facilities or make suitable contribution to the government for facilities furnished to them. Only in this way is every user of transportation enabled to select that form of transportation best suited to his needs and most economical, all factors of cost being taken into consideration, whether those costs be direct out-of-pocket expenditures by those who use it or whether the costs be reflected in the form of taxation.

2—Equality of opportunity cannot be obtained unless these agencies of transportation are regulated in the same fashion and by the same agency. The railroads do not insist that every item of present federal regulation should be applied to water and motor transportation; neither do they insist that the greater part of the present federal regulation should be removed from all agencies. There should certainly be some relaxation of present federal regulation as will be explained later, and there should be applied to motor and water transportation the same degree of federal regulation. This is obvious since the three forms of transportation are highly competitive. Each is handling a very considerable part of the traffic of the country, and with respect to regulation no reason can be suggested why there should be difference of treatment.

3—The interstate rates of motors and the port to port rates of the inland waterways are not subject to federal regulation. To this extent they are free to make rates by contract or otherwise without publishing the rates and tariffs or giving any notice whatever. They are doing this to a very considerable extent. Their ability thus to make such rates as are necessary to secure the traffic has resulted in the railroads being unable to compete, since the railroads must file their rates on 30 days' notice or in special cases secure shorter notice from the commission. The railroads are not suggesting that they be given all the freedom which is now enjoyed by motor and water transportation. They are asking, however, to have the right more nearly able to meet the competition of the motor and water lines by giving not more than five days' notice. This will render more flexible the railroad competitive rates than at present and while it will not give an equality of regulation, it will be a step in that direction. The railroads are willing to give notice of such changes to their competitors operating in their territory.

4—Inland waterway carriers may and do make their rates and motor carriers may and do make their interstate rates without any regulation whatever or without the necessity for publishing tariffs. The railroads, however, when a new rate is proposed, are subject to a law which permits the commission to suspend those rates pending investigation. If the rates are suspended, the mischief is done, because they cannot go into effect until after the hearing has been completed. By that time the traffic will have been lost to their competitors. It would only be fair, therefore, that when the railroads put in rates to meet the competition of their unregulated competitors they should be allowed to put those rates into effect without the power on the part of the commission to suspend. Any such rate would be open to attack by any interested party in a formal proceeding before the commission, but in the meantime, pending the decision of the commission, these reduced rates would be in effect.

5—Under the law as it stands now, the commission may not only prescribe the highest rate which the carrier may charge, but it may also prescribe the lowest rate. No such authority rests in any regulating body as to interstate commerce on the highway nor to the inland port to port water rates. These competing forms of transportation can make rates as low as they please. The railroads should have the right to make their rates low enough to meet the competition of these carriers in a particular locality without giving power to the commission to prohibit them from making such rates. It may be well enough still to allow the commission to prescribe maximum rates which will protect the shippers against exorbitant rates, but the rail carriers grappling with unregulated competitive forces should have the right to name rates low enough to make competition effective.

6—As the law stands now, the rail rate structure is a complicated one which reflects competition among commodities and among communities, and many of these rates are related to each other. They are under the control of section 3 of the Interstate Commerce Act, which prohibits discriminations. In other words, the proposition here is to change the law so that when a rail carrier finds it necessary to reduce a rate between two points or upon a certain commodity to meet the competition of a motor or water line, it should not be required to change all its other rates which have hitherto been made in relation to the rate which is reduced. To require the railroads to do so does not help the communities affected. If we assume, for instance, that there is a rate on dairy products from Sioux City to Chicago, and the trucks are handling the greater part of the traffic at a rate lower than the rail rate, the reduction in such a rate by the rail carriers between Sioux City and Chicago will not injuriously affect any other community or any other commodity, for the reason that the traffic is now moving on the lower rates by truck between Sioux City and Chicago. A reduction by the rail carrier simply permits it to engage in the transportation of freight now moving by truck. Clearly it is unfair to require the rail carrier to reduce all its rates made in relation to the Sioux City-Chicago rate merely because it seeks an opportunity to engage in this particular traffic. All rates so made would be subject to formal complaint before the commission by any shipper who could show that the rate was unreasonable or that he was being injured by its being established.

7—The rail carriers are of the opinion that the fourth section, commonly known as the long and short haul clause, should be so modified as to make it read as it originally did prior to the amendment of 1910; that is to say, the railroads would be willing to have the law so written that they could not charge a lower rate for a longer distance than for a short distance, the short being included in the longer, "except under similar circumstances and conditions." This was the substance of the law as originally enacted, and under the construction of the statute by the Supreme Court of the United States it was sufficiently flexible to permit modifications of the principle where competition made it necessary to do so. This rule has been getting more and more inflexible, until it is an absolute rule, with some few exceptions which the commission has permitted. As it stands now, and has been construed by the commission and the courts, it gives the motor and water carriers tremendous advantages, so that the railroads cannot meet the competition of these unregulated carriers at certain points where the competition is active without reducing all their intermediate rates. As a result, they find it necessary to retire from the business at many points where it would be in the public interest for competition to be active. It is reported that the National Industrial Traffic League, a very

important shippers' organization, has recommended the entire repeal of the clause.

8—(Should those paragraphs of Section 5 of the Interstate Commerce Act, commonly known as the Panama Canal Act, be repealed?) Yes. Those paragraphs now provide that no railroad company shall own or operate, or have any interest in, any water carrier operating through the Panama canal. Elsewhere the Interstate Commerce Commission is given authority to allow affiliations between a rail carrier and a water carrier, provided there is no competition or possibility of competition. As a result of this provision, the railroads have been compelled to withdraw from operations on the Great Lakes and, in many cases, from coastwise operations and are prohibited from operations on the inland waterways. If there is to be any proper co-ordination of transportation as among rail and water carriers, the rail carriers should be permitted to own and operate water lines in the public interest, subject, of course, to the right of the Interstate Commerce Commission, or other regulating body, to grant or withhold certificates of public convenience and necessity. Thereby there can be no injury to the public interest, since the Commission will have control of the establishment of these lines and their abandonment. The country should get away from the idea of rail transportation, water transportation and motor transportation as distinct agencies and think of them as a co-ordinated system of transportation, operating in the public interest and each performing that service for which it is best fitted. Restrictions upon the right of the railroads to operate water lines are inconsistent with the whole theory of regulation by a governmental agency.

9—(Should the Inland Waterways Corporation Act, as amended May 29, 1928, be amended so as to permit the railroads and persons connected with the rail carriers to acquire by purchase or lease any of the facilities of the Corporation upon the giving of satisfactory assurance that such facilities bought or leased will be continued in common-carrier service?) Yes. The observations made in reply to Question 8 apply here. If a railroad is able to convince the commission, or other regulating body, that any facility bought or leased will be continued in common carrier service, subject to the regulation of the commission, it should have the right to buy or lease such facility.

10—(Should Section 16, paragraph 3, sub-sections (a), (b), (c) and (d) of the Interstate Commerce Act be amended by reducing the time limits for the filing of claims for overcharges, for the filing of suits for reparation and for the filing of carriers' suits for recovery of their charges, and if so what new periods should be fixed?) In the opinion of the carriers, the time limits referred to in this inquiry should be shortened. As the law stands now, in a complaint not based on a tariff overcharge the shipper has two years within which to file his complaint before the commission. If an overcharge is involved, he has three years after it is made to file his complaint before the commission. The carrier has three years in which to bring a suit against the shipper for an undercharge. These periods are entirely too long. We think it would be entirely sufficient if shippers were required to file their complaints against the carriers within 90 days after the shipment is delivered and within six months where there are overcharges. The carriers should be required to file their suits for undercharges within six months from the time shipment is delivered. This will give all parties ample time to audit and present their claims.

11—(Should Section 16, paragraph 2, of the Interstate Commerce Act be amended to eliminate the part thereof which provides for the award of attorneys' fees to the shipper?) Yes. As the law stands now, in addition to recovering damages, the shipper may recover substantial attorneys' fees. This provision is not one which is common in ordinary damage suits. It has no application to a suit for damages based on personal injuries or other wrongs upon which any individual may feel aggrieved. Its presence in the statute is a perpetual temptation for reparation damage suit lawyers to stir up trouble. It should be understood that the railroad companies file their rates according to their best judgment and when the Interstate Commerce Commission finds a rate unreasonable, it awards reparation, not as a penalty but presumably measuring the damages which the shipper has sustained. Often the railroad company is sincerely of the opinion that the commission exceeded its powers and resort is had by the shipper to the court for redress. In such cases, the ordinary rule should be followed to award damages only and not a penalty by way of attorneys' fees. This feature of the law has been found very burdensome and provocative of litigation.

12—(Should Section 8 of the Interstate Commerce Act be amended to limit the recovery of reparation to complainants proving actual pecuniary loss?) Yes. According to the decision of the Supreme Court of the United States, a shipper who has paid a rate which is afterwards found by the commission to be unreasonable can recover the balance, even though he has added the excessive rate to the price of his product and has, therefore, suffered no actual damage. Under the law as it stands now, he may recover the amount twice—once from his customer and once from the railroad. A change should be made in the law which would prohibit a shipper from recovering damages unless he can show actual damages and establish that some actual loss has occurred due to the unreasonable rate. This reform has been repeatedly recommended by the Interstate Commerce Commission.

B—Co-ordination

1—In our opinion, steps should be taken to make it possible for all agencies of transportation to be co-ordinated in the sense that they should be so regulated and operated that every person who uses transportation shall have the right to select that agency which will be most economical and best suited to his individual needs. With respect to economy of operation, it should be borne in mind that there can be no true economy unless all hidden factors of cost are brought to the surface; and that a particular form of transportation should be the most economical not only to the one who uses it but to the taxpayer and to the general public. They should not be kept apart by law, as in the case of railroads and waterways. They should not be kept apart by some agencies being regulated and others unregulated. Observations made in reply to Question 1 of Section A are pertinent here.

2—The railroads should have an opportunity to bring about this co-ordination by ownership of rail, motor and water facilities. It is recognized that if water and motor transportation were regulated to the same extent as rail transportation there might be cases where it would be better for the motor and water agencies to be independent in ownership, and upon the assumption that there is a complete system of regulation applicable to all, there would be no objection to giving to the regulating body power to establish joint through rates so that co-ordination could be more complete. Legislation should be so shaped that co-operation would not only be possible but would be required whether the motor and water agencies are independent of the railroads or whether they are owned and operated separately. These observations also apply as well to agencies of transportation by air. In all such matters the public interest should be first, and by public interest we do not mean simply the interest of shippers but those who support the agencies of transportation either through the payment of rates or the payment of taxes.

C—Regulation of Interstate Motor Carriers

1—(Should interstate motor buses and/or trucks be regulated by the federal government?) Yes. Under our system the states are not permitted to regulate the interstate operations of motor buses and/or trucks. Such has been declared to be the law by the Supreme Court of the United States. Either such interstate operations must be regulated by the federal government or not at all. The best thought in the country, including most of the motor bus operators and a very considerable number of the more responsible truck operators, are now convinced that federal regulation of motor buses and trucks is essential to an orderly system of transportation. To this end the Association of Railway Executives, in connection with the National Association of State Railroad and Public Utilities Commissioners, as well as certain groups of motor bus and motor truck operators, have agreed upon a regulating measure which should command the united support of the country.

2—As stated above, common carrier truck and bus operations should be regulated by federal legislation. Most students of the problem are agreed upon this proposition. There can be no proper regulation of common carriers, however, unless contract carriers are subjected to some measure of regulation. If common carriers are regulated and contract carriers are left unregulated, a great many of the common carriers will be transformed overnight into contract carriers, so-called. Many of those will be performing a common carrier service under the guise of contract carriers. Many of them are doing so now to avoid applicable state regulatory legislation. To the end that contract carriers may not defeat the regulation of common carriers, there should be federal legislation which will require contract carriers to obtain permits, make reports to the commission, keep their accounts in an orderly way, and particularly should there be provisions which would give to the regulating body the right to control the minimum rates of the contract carriers. This fact is recognized in the industry itself, at least to a certain extent, in that the proposed code applying to common and contract carriers contains provisions for regulating minimum rates of contract carriers. Private carriers are undoubtedly subject to the police regulations of the states, but the railroads are not prepared at this time to recommend the regulation of rates, certificates of convenience and necessity, permits, or other similar federal regulatory measures.

3—In our opinion, legislation providing for the regulation of

the sizes and gross weights of motor vehicles and combinations thereof should be left to the regulatory agencies of each state. Uniform standards, applicable throughout the United States, can not be set up in view of the difference in the type of roads which the several states have constructed. Highways vary in thickness, width and ability to withstand heavy loads, and in the strength and type of bridges. These are inherently matters for local control and the federal government should not undertake to invade this field. Such is the general opinion of the state regulating authorities and this thought is reflected in the bill which is referred to above as having received the endorsement of the State Utility Commissioners in that it is therein provided that nothing in the Act shall be construed to affect the powers of taxation of the several states or authorize a motor carrier to do an intrastate business on the highways of any state, nor is it intended to interfere with the exclusive exercise by each state of the power of regulation of motor vehicles with respect to maintenance, protection, safety or use of the highways, provided both interstate and intrastate vehicles are treated alike. We do not believe that these peculiar police regulations, generally recognized for many years to be within the province of the state, should be disturbed by the federal government. It is doubtful if the federal government can constitutionally regulate such matters.

In the light of these conclusions, it would seem to be undesirable to make any suggestions as to maximum permissible lengths and gross weights. Such matters should be left to the states exclusively and be determined according to their local conditions.

4—(What are your views with reference to providing for compulsory public liability and property damage insurance bond in any federal Legislation enacted pertaining to motor buses and trucks?) This question can best be answered by quoting Section 11 of the motor vehicles bill approved by the railroads and others mentioned above, which provides:

"Sec. 11. No certificate or permit shall be issued to a motor carrier or remain in force, unless such carrier complies with such rules and regulations as the Commission shall adopt governing the filing and approval of surety bonds, policies of insurance, or other securities or agreements, in such amount as the Commission may require, conditioned to pay within the amount of such surety bonds, policies of insurance or other securities or agreements, any final judgment recovered against such motor carrier for bodily injuries to or the death of any person resulting from the negligent operation, maintenance, or use of motor vehicles under such certificate or permit, or for loss of or damage to property.

5—(What legal authority exists under which the federal government could enact legislation to regulate contract and private motor operators?) It is well settled in the case of *Sproles* vs. *Binford* 286 U. S. 374, *Stephenson* vs. *Binford*, 287 U. S. 251, and *Continental Baking Co.* vs. *Harry H. Woodring* (decided on May 23, 1933, that the States can regulate contract carriers to the extent of requiring permits and the making of reports, the supervision of accounts and the preserving of minimum rates. It was held by the courts that this power is essential not only to protect the highways but to protect the business of common carriage. There can be no doubt that if the states, in order to foster the proper handling of intrastate traffic, can make these requirements, the federal government, in the exercise of its power to regulate interstate commerce, may require the preservation of minimum rates for contract carriers as well as the issuance of permits. That question is put at rest by the decisions of the Supreme Court of the United States in the cases above mentioned. Nothing is here said with reference to the regulation of private carriers by the federal government since this is not within the scope of the recommendations made by the rail carriers at this time.

6—(Should those who use public highways for commercial purposes bear the cost of any added thickness and width of the highways required by the operation thereon of large commercial vehicles?) Yes. This is the recommendation of the Joint Committee of Railroads and Highway Users Conference in its report of January 30, 1933, concurred in not only by the railroads but also by those who participated in that conference on behalf of the motor interests. This recommendation is as follows:

"The basic cost of constructing, improving and maintaining a given highway should be determined from a highway designed for private passenger vehicles and other vehicles commensurate therewith. All vehicles using such highways should pay their proportionate share of that total as a base tax. The total additional cost of construction, improvements and maintenance to make a road suitable for a type of vehicle requiring such additional cost should be shared by each vehicle of that type and each vehicle of greater size. Thus, each group should share in the base cost plus all increments of cost up to and including cost required by it."

These additional costs are of substantial amounts. The railroads are prepared to demonstrate on recognized highway engineering authority that they range from 50 to 100 per cent or more for heavy commercial vehicles.

D—Regulation of Domestic Water Lines

1—(Should the federal government regulate domestic water lines?) Yes. If there is to be any orderly conduct of transportation in the three important fields of rail, motor and water transport, the domestic water lines should be regulated. The states have little or no power to regulate transportation upon the navigable waters of the United States. This is, therefore, ordinarily a federal function. The same general considerations which lead to the conclusion that interstate motor transportation should be regulated apply as well to domestic water lines.

2—If there is to be federal regulation, it should be sufficiently comprehensive to embrace the full regulation of common carriers and the regulation of contract carriers by water to the same extent that contract carriers by highway are regulated; that is to say, common carriers by water should be required to secure certificates of convenience and necessity, file and observe their rates, and generally to conform to the regulations now resting upon common carriers by rail. In the case of contract carriers by water, they should be required to secure permits before they operate and to observe minimum rates. The regulation should be sufficient to secure these ends. In addition, the regulating body should have the right to require reports and supervise the accounts. Briefly stated, the same regulations should apply to water lines as apply to carriers by highway.

3—The regulation of the water lines should be by the same governmental body that regulates both the rail carriers and transport on the highway. It is impossible to bring about a co-ordinated, consistent and fair system of regulation unless the regulating authority for all types of transportation is vested in the same body. If this be not done, there will be no uniformity of regulation and no real co-ordination of effort. This fact is recognized by most of those who have given impartial and careful study to the problem.

4—It is the position of the railroads that such inland waterways as have been the subject of expenditure of public funds in order that they may be made navigable, and which are maintained at public expense, should be subject to tolls, which should be fixed by some impartial body and should represent a charge which would approximate interest upon the government's investment in the waterway and the maintenance expenses incurred by the government in keeping it up. The system of tolls should be fair, and not be in excess of what is reasonable as representing the additional expense to which the government has been put in rendering these waterways more navigable and more adapted to the uses and needs of commerce. If these tolls be not charged, the use of the waterway thus made navigable at the expense of the taxpayer will be the nature of a subsidy and there can be no real co-ordination of transportation in the proper sense and on equality of treatment until all special privilege has been withdrawn from every form of transportation. It is not suggested that this rule should apply to harbors nor to such waterways as have not been the subject of expenditures by the government in order that their navigability may be assured and so that they can be used to commercial advantage by waterway operations.

5—It is not here suggested that private water carriers be regulated, in the sense that their rates and charges should be fixed or that permits should be required. In the case, however, of contract carriers by water, the same considerations which have led the Supreme Court to conclude that contract carriers by highway can be regulated would obviously apply in the case of contract water carriers; that is to say, if the Congress should reach the conclusion that, in order properly to foster, protect and develop the common carriage of traffic by water, it is necessary to regulate contract carriers to the extent of issuing permits and prescribing minimum rates, there can be no question as to the constitutional power of Congress to accomplish this end in this way.

E—Regulations of Industry to Transportation

1—The carriers do not suggest at this time that the present commodities clause should in any way be modified.

2—While there has been no declaration by any railroad authority upon the subject, the general counsel of this association offers as his individual suggestion that the commodities clause should be extended to water carriers just as it has been to rail carriers. The same considerations which caused Congress to declare it to be public policy that the commodities clause should apply to railroads, applies with the same force to water carriers.

Cab Signals on the Boston & Maine

THE permit, issued by the Interstate Commerce Commission on October 30, as noted in the *Railway Age* of November 11, page 708, authorizing the Boston & Maine to discontinue the use of automatic train control on its line, provides for the use of light signals in the cab, giving only two indications—green for proceed and lunar white for caution—though many of the roadside visual signals give three or four indications.

The line of road affected by the order is from West Cambridge, Mass., westward to East Deerfield, 99½ miles, of which 4.9 miles is three-track. An additional light signal is to be installed on the left side of the cab for the use of the fireman. A vertical row of green lights will indicate normal speed, and a horizontal row of lunar white lights the restrictive indication. The latter requires speed to be controlled in accordance with the indications displayed by the roadside signals. There is a recurrent-acknowledgment feature, designed to change the cab indication on passing a restrictive wayside signal. With this the engineman operates an acknowledging device to prevent an automatic application of the brakes; and with cab signals only it will require him to silence an audible indicator.

The road supported its application by a statement showing severe falling off in revenue and earnings, with a reduction in the number of trains. Automatic train stop operation has cost about $40,000 a year, of which $11,000 is apportioned to the pneumatic brake-setting apparatus. In the year 1932 there were 34 undesired brake applications, causing delays, minor accidents and additional expense.

The maximum permissible speeds on this line today are 70 m. p. h. for passenger trains and 45 m. p. h. for freights; 20 miles and 10 miles greater than in 1926, when automatic train control was put in operation. Within the past six years the company has made extensive improvements in its roadside signals, and has installed centralized traffic control on 43 miles of this line. Remote control of signals has also improved conditions at some points, and color-light signals have been substituted for semaphores on nearly the whole of the 99½ miles. A total of $5,283,270 has been expended for signaling improvements on the whole of the B & M lines in the years 1927-1932; and a large share of this has been on this section.

The company states, further, that centralized traffic control has measurably increased safety, as it places in the hands of one responsible man duties which, in ordinary train operation, are performed by several men. Since C. T. C. was installed, there have been no reportable train accidents in that territory.

The two-indication arrangement in the cab is adopted because the road believes that the probable expense of changing the cab indications to correspond to the four-indication roadside signals ($245,000) would not be warranted. Moreover, a more elaborate cab signaling arrangement would nullify the advantages of high-speed signaling embraced in the C. T. C. system.

Holding that, from the evidence, it appears that C. T. C. has added materially to safety and efficiency, and that the cab indicator system, with whistle and acknowledger, will adequately provide for safety on this line, and will promote economy, the Commission grants the petition.

The order says: "The arrangement provides, that when track conditions ahead are unrestricted, a green cab indication will be displayed; when track conditions ahead are restricted, the cab indication will change from green to lunar white and a warning whistle will sound. When the cab indication changes from green to lunar white, unless the engineman can pick up a less restrictive indication from the wayside signals, he will be required to regard the cab indication as the most restrictive signal indication which could be received at that point. If the engineman sees the wayside indications, he will be governed by them. The difference between the present automatic train stop system and the proposed cab indicator device is that with the former the brakes apply automatically if a downward change of indication is not acknowledged and under the proposed arrangement the whistle will blow continuously if not acknowledged. Because of the recurrent acknowledgment feature the cab indication will change and the warning whistle will sound at every succeeding restrictive wayside signal, requiring the operation of the acknowledging switch to silence the whistle. Both the engineman and the fireman are thus periodically reminded of the restriction. Under the proposed method of operation, the same information will be conveyed to the engineman as with the existing system."

Testimony of officers and enginemen was to the effect that operation will be as safe as heretofore, and in some respects safer, because of doing away with undesired applications of the brakes.

The road is required to submit rules for operation, to be approved by the Commission.

* * *

Photo by E. Meerkamper, Davos, Switzerland.

An Unusual View of an Entire Railway

The new Davos-Parsenn Cable Railway, in the Grisons, Switzerland, takes 20 minutes for the climb from Davos, 5,115 ft. above sea level, to the Parsenn, 8,732 ft.

Motor Transport Section

Storedoor Service Near on Eastern Lines

Pennsylvania, Erie, Grand Trunk Western and several connecting lines propose adoption on December 1—Other eastern roads file protest

WHETHER or not the long anticipated adoption of pick-up and delivery service for l.c.l. freight by eastern railroads will become a fact within a few days or will be further postponed depends upon the action of the Interstate Commerce Commission, which this week heard arguments* pro and con upon the tariffs providing for this service filed by the Pennsylvania, the Erie and the Grand Trunk Western. Participating with the Pennsylvania in its tariff are the Boston & Maine as an initial, intermediate and terminal line; the Canadian Pacific, the Delaware & Hudson and the New York, New Haven & Hartford as intermediate lines; and the Central Vermont, the Long Island and the Maine Central as initial and terminal lines.

Up to the present time, railroad-provided pick-up and delivery service for l.c.l. freight, while fairly prevalent on the Pacific Coast, in the Southwest, in the Southeast and in New England, has not been adopted on any scale by railways in the industrial section of the East. Experiments to ascertain the effectiveness of this service in retaining and recovering l.c.l. freight traffic have been made by the Pennsylvania, in the Philadelphia-Atlantic City territory, on the Delaware-Maryland peninsula and on Long Island. If the Pennsylvania, the Erie and the Grand Trunk Western are permitted to place their storedoor tariffs in effect, a great impetus will be given to the general adoption of this service by all railways, for it is believed that other eastern lines can hardly refrain from meeting the competitive situation by similar action.

Provisions of Tariffs

As provided in the various tariffs, the Pennsylvania, the Erie and the Grand Trunk Western propose to provide a complete optional collection and delivery service on l.c.l. freight, moving on class rates or certain percentages thereof not lower than fifth class, at all principal points on their lines. The tariffs are published to become effective on December 1, 1933, and to expire one year later, unless sooner cancelled, changed or extended. The proposed service, which will be afforded at the request of the patrons, will apply on all l.c.l. traffic except certain restricted commodities originating and terminating on the railways named as initial and terminal lines. For distances up to and including 260 miles, collection or delivery service or both will be performed at no extra charge in addition to the applicable class rate named in the governing classification or exceptions thereto. For distances of 261 miles and up to and including 360 miles, a scale of additional charges is provided for the service, these charges increasing with the distance until at 361 miles and over the charge for collection or delivery is 6 cents per 100 lb., or 12 cents per 100 lb. for both services. All charges are subject to a minimum rate of 35 cents per 100 lb. and a minimum charge of 50 cents per shipment. On traffic destined to or received from lines which are not participating in the tariffs, where the applicable class rate is 29 cents per 100 lb. or higher, collection or delivery service will be performed at a charge of 6 cents per 100 lb., with a minimum of 25 cents per collection or delivery. Under the proposed arrangement, shippers will deal directly with the railroad agent at the station of origin or destination, and the understanding is that the railways will contract with local truckers to provide the collection and delivery service as their agents.

Other Roads Protest

The three eastern roads and their connections which are proposing the new service have met resistance from their neighbor roads. Seventeen of these roads have united in a protest and have petitioned the Interstate Commerce Commission for suspension and investigation into the lawfulness of the rates, charges and practices contained in the pick-up and delivery tariffs. Oral arguments were heard by the commission on November 21, at which time the expectation was that the commission would take quick action since this has been requested not only by the roads filing the new tariffs, but also by the railways protesting against them. The only advance indication of what the attitude of the commission might be was to be derived from the correspondence between Commissioner Joseph B. Eastman, as federal co-ordinator of transportation, and F. E. Williamson, president of the New York Central, who protested against the provisions of the Pennsylvania tariff before it had been filed. Co-ordinator Eastman, in reply, refused to interfere and took a favorable attitude toward the plan.

The petition to the Interstate Commerce Commission from the protesting lines was published in the *Railway Age* of November 18, pages 738-9. Briefly, the protest against the tariffs was based upon allegations of chances for conflict between the pick-up and delivery plan as provided in the tariffs and the general plan for meeting motor truck competition now being worked out by the organization of the federal co-ordinator of transportation. It also contained charges that the collection and delivery service promises to be economically wasteful in that the service will cause the railways to make an outlay of money greater than their patrons will save, and in that the undertaking will broaden the field of com-

*A report of these oral arguments appears in the News Department of this issue.

petition between railways and encourage practices which will be wasteful if not worse; that the proposed service can be furnished only at excessive cost to the railways and is tantamount to a reduction in rates; that the net result of the proposed collection and delivery service will be a substantial reduction in revenues; and that the public clamor for collection and delivery service is based not on convenience to as great an extent as upon a desire for reduction in transportation costs.

Pennsylvania Supports Proposal

In reply to this protest, the Pennsylvania contended that "collection and delivery service in one form or another has had sufficient trial and consideration to justify making the experiment." Other methods for affording a door-to-door freight service, it is contended, make it necessary to provide such a service for the public at once, to enable the railways to regain and retain their l.c.l traffic, while at the same time instituting economies in their terminal operations. An abstract of the general brief filed with the commission by counsel for the Pennsylvania and railways participating in its tariff follows:

Complete door-to-door transportation service has come into such general use that shippers are accustomed to it, rely upon it and demand it. It is a commercial necessity. That demand is met in various ways, by direct truck service, by containers, by express and forwarding companies which furnish a collection and delivery service, and by other expedients; but whether by one method or another, door-to-door transportation of l.c.l. freight has come to be an essential commercial requirement.

That the rail carriers have lost a tremendous amount of l.c.l. traffic to the trucks does not admit of doubt. As an illustration, the volume of l.c.l. traffic handled by the Pennsylvania has been declining so rapidly during the last 10 years that it has continued to be a matter of serious concern:

Year	Tons	L. c. l. Freight Revenue
1923	9,129,819	Not Available
1924	6,900,929	"
1925	7,277,974	"
1926	6,461,578	"
1927	6,149,962	"
1928	5,627,337	$49,645,540
1929	5,627,103	50,576,247
1930	4,677,591	41,529,662
1931	3,725,989	33,565,815
1932	2,579,514	24,864,616

The tonnage handled in 1932, as compared with 1923, represents a reduction of approximately 72 per cent, and since 1928 the revenue therefrom has fallen 50 per cent.

A careful and exhaustive analysis has pointed conclusively to the fact that unregulated or partly regulated competition from trucks was the factor principally contributing to the decline. Densely populated and highly industrialized territory served by the Pennsylvania renders it more vulnerable to truck competition than most other railroads. This is borne out by the following comparison: In 1932, the volume of l.c.l. traffic originated by Class I roads (15,233,791 tons) was approximately 66 per cent under that handled in 1923 (44,338,556 tons), whereas the contemporaneous reduction in the l.c.l. traffic of the Pennsylvania approximated 72 per cent as stated.

A considerable number of the larger cities of the country and over half the manufacturers of the nation are located in the area served by the Pennsylvania. Almost every community is within short reach of large centers. As a consequence, much of its l.c.l. traffic is short haul and susceptible to truck competition. Practically the full force of the competition is in the shorter hauls. Prior to the advent of the truck, the Pennsylvania handled an enormous volume of l.c.l. traffic for hauls within a radius of 100 miles. This, as appears from the following analysis of its local l.c.l. traffic for one week in June, 1931, compared with a similar analysis from 34 representative points for one week in September, 1932.

Analysis of Local L. c. l. Traffic

Miles	Percentage of Tonnage June, 1931		Percentage of Tonnage September, 1932	
1 to 100	24.1	72.3	20.3	54.0
101 to 200	21.0		19.1	
201 to 300	13.4		13.0	
301 to 400	13.8		11.6	
401 to 500	12.2		12.9	
501 to 600	4.9		7.2	
601 to 700	3.8		4.7	
701 to 800	3.0		4.0	
801 to 900	3.0		3.9	
901 to 1,000	0.5		2.7	
Over 1,000	0.3		0.6	

Particular attention is directed to the relative changes, i.e., the declines for the shorter hauls and the increases for the longer hauls.

Other indications of severe competition encountered by railroads on l.c.l. traffic are:

1—The carload tonnage handled by Class I carriers in 1929 (1,303,047,756) was 5.5 per cent higher than that handled in 1923 (1,234,691,666), whereas the l.c.l. tonnage for 1929 (36,043,271) was actually 19 per cent under 1923 (44,338,556).

2—From 1929 to 1932, inclusive, during a depression period when the general practice of "hand-to-mouth" merchandising should obviously have resulted in increased purchases in small units, l.c.l. shipments declined in greater proportion than carload, viz., 58 and 52 per cent, respectively.

The carload tonnage (227,479,853 tons) handled by the Pennsylvania in 1929 was 4.05 per cent less than its 1923 carload tonnage (237,076,725 tons). If the l.c.l. tonnage handled by the Pennsylvania in 1929 had reflected no greater reduction than the carload tonnage, it would have handled 8,752,385 tons instead of 5,627,103 tons. The difference, 3,125,282 tons, may be said to represent loss to competitive forms of transportation. Considering that a substantial amount of carload traffic has also been diverted and that the growing tendency is toward hand-to-mouth buying, this figure is really conservative.

L.c.l. Traffic Lags

The volume of l.c.l. traffic since the revival of business has not increased in the same proportion as carload traffic. Loadings of all classes of carload freight have generally been in excess of those for the corresponding periods of 1932, but the number of cars loaded with merchandise in l.c.l quantities is still below the loadings of the previous year.

The performance of a complete service and lower rates in the aggregate are the principal reasons ascribed to the success of the truck. It is difficult to determine the exact radius of truck operation since there are very many factors involved in determining the economic length of haul in any given case. It seems well established, however, that the economical sphere is confined to overnight runs, and this will embrace hauls somewhat in excess of 300 miles. Within this distance truck rates are usually the same as the rail rates, but include collection and delivery. There are exceptions, of course, and there are undoubtedly instances where higher than rail rates are charged, but these are more than offset by cases where lower than rail rates apply.

As the length of the truck haul increases beyond 300 miles, competition in the general run of l.c.l. freight diminishes rapidly. This is primarily due to:

(a) The fact that railroad rates and ton-mile revenues decrease sharply as distance increases; and

(b) To the relatively higher trucking expense for greater distances.

Plan Based on Competitive Conditions

In effect, the contemplated plan is predicated on the foregoing. It is proposed to absorb the cost of collection and delivery on hauls up to 260 miles, subject, however, to a minimum rate of 35 cents per 100 lb. and a minimum charge of 50 cents per shipment. From 261 to 360 miles, collection or delivery service or both will be offered at graduated charges up to 361 miles where the maximum amount of 6 cents for each service is assessed. This is on the principle that, as the force of competition decreases, necessity for absorption does not exist.

While the rates may in some cases be lower than reasonable maxima, they are, in the opinion of proponents, compensatory and the maximum that they can hope to obtain under existing conditions.

The managements of the carriers proposing the above described collection and delivery service have faith in the future of the railroads of this country. They recognize that "new occasions teach new duties" and that the conditions of the present day call for such improvements in their conventional services as will meet present requirements. For some time, they have been firmly convinced that the proposed action was necessary to prevent further losses as well as to recover traffic already lost. Almost a year ago they submitted this proposition to the other carriers in Official Classification territory and it has been discussed thoroughly from all conceivable angles. Proponents do not maintain that the establishment of this service is a panacea for all the difficulties confronting the rail carriers. But, clearly, it is an indispensable part of present transportation and an essential part of any program for traffic recovery.

The carriers proposing this service have no wish or intention to squander their own resources or occasion loss to others. The conservatism of their traffic policies over the years is well known. They are, however, convinced that, with their present transporta-

tion machines, supplemented by truck service in fields where that agency of transportation has shown itself most effective, they can provide the public with an efficient service at reasonable cost, which will enable them to regain lost traffic, retain traffic that might otherwise be lost and promote numerous economies in terminal and other operations.

Under present arrangements, the shipper who sends his l.c.l. freight by railroad generally must provide for getting it to the station, and the consignee must likewise provide for having it delivered to his place of business. At least three agencies, public or private, collaborate in the transportation, and their services must be separately arranged for. One of the advantages of door-to-door truck service has been the convenience to the shipper of dealing with a single agency. The collection and delivery service here proposed extends this convenience to the shipper in connection with railroad transportation of his l.c.l. freight. He can arrange with the railroad station agent for the complete door-to-door service.

Mass transportation can be performed more efficiently by railroads than by highway except for shorter distances. This is generally acknowledged. The railroads have their own rights of way and can provide expedited movement to meet commercial demands. In terminal handling of freight, the truck has shown a superiority and flexibility of service which is both advantageous and economic. The terminal trucking which will be used in connection with the collection and delivery service will be in the hands of truckers who are expert in that line. In the opinion of the proponents, the proposed service, combining as it does rail and truck service each in its most efficient sphere of operation, should produce a form of transportation effective in action and truly economic.

Rate Reduction without Disturbing Rate Structure

The commission has recently considered demands on the part of many shippers for a horizontal reduction in railroad rates. One of the points constantly reiterated by those asking for reductions was that the prescribed scales of class rates, particularly for shorter hauls, were higher than would enable the carriers to compete effectively with highway transportation. Reductions generally could not be countenanced because of the carriers' financial situation. Nevertheless, in recent years the commission has permitted the carriers to make numerous specific reductions in order to meet competition of other transport agencies. The provision of collection and delivery service without extra charge for the shorter hauls, as here proposed, gives the shipper at least as great benefit as would a reduction in the rates for those distances but without disturbance of the basic rate structure. In general, this additional service without extra charge applies in connection with rates which have been least effective in meeting truck competition. With the additional service, proponents of the proposed service are confident that they have a substantial prospect of achieving a satisfactory financial result. But in any event, the proposed method has the distinct advantage of leaving the basic class rate structure intact, so that, if the test discloses some better method of meeting the problem, the expiration of the schedules providing for the optional service would not effect any such real increase in the prescribed class rates as might seem to require special justification.

One of the serious disadvantages to shippers of highway transportation in its existing form has been the lack of stable charges and the variability of rates for substantially similar services. Secret rates subject to instantaneous change have introduced an uncertainty into competitive dealings of shippers which has undoubtedly been of substantial disadvantage to them. The proposed service is covered by regularly filed tariffs fully subject to regulatory authority, which can readily require removal of any undue or unreasonable inequalities or discriminations that might arise. Thus, to the extent that it is patronized, the proposed service tends to introduce into business transactions something of the element of stability which is so much needed under present conditions.

The conditions under which transportation must be performed have changed substantially since the advent of highway and air transportation. The rail carriers must adapt their service to present conditions or continue to suffer substantial losses of their traffic.

Good Chance of Recovering Traffic

Based upon such experience in affording collection and delivery service as lines in this and other countries have had, and based upon their own experience with respect to door-to-door service, the carriers here proposing collection and delivery service of l.c.l. freight have reached the conclusion that it furnishes a reasonable prospect of enabling them to regain a substantial portion of the traffic which they have lost, to retain traffic which otherwise would eventually be lost to them, and to institute numerous economies in their operations. In their opinion the anticipated results, as well as the necessities of the case, justify making the experiment throughout the territory served by them.

The rail carriers have a clear right to compete for the traffic which they have always handled, even though changed conditions make some revisions in their services and rates necessary. If the competition which they meet is unfair by reason of subsidies granted other transportation agencies, the public which ultimately bears the burden of an overproduction of transportation will ultimately right the condition. But in the meantime, shall all initiative and effort to meet the competition of other agencies be prevented, awaiting the day when conditions have become absolutely equal? Or, rather, shall not sincere endeavors on the part of railroads to aid in the solution of their problems receive encouragement and approbation?

Storedoor Service Experiments

For many years collection and delivery service has been provided by the English railways. It is generally regarded as an indispensable part of their service. Canada has collection and delivery service in the commercially important portion of its territory east of Fort William, Ont. The Pennsylvania and the Baltimore & Ohio, for many years prior to 1914, gave storedoor delivery in Washington, D. C., and Baltimore, Md., but discontinued the service in response to findings of undue prejudice. They elected this alternative rather than the extension of the service to other localities, because they were not then prepared, or under any competitive compulsion, to inaugurate the service generally in the territory served by them. Proponents of the proposed tariff are now ready to establish the service throughout their systems.

The eastern carriers have made various studies dealing with collection and delivery in various forms, and at one time or another most of them have approved the principle thereof, although of differing views as to the best method of providing the service. Rail carriers in the Southwest established collection and delivery service about two years ago. More recently the railroads in the South inaugurated collection and delivery service to an important extent in their territory. A number of the New England lines have collection and delivery service.

For some time tariffs have been in effect providing for collection and delivery service on the Long Island; on the Pennsylvania between Camden, N. J., Philadelphia, Chester, Pa., Wilmington, Del., and Baltimore, Md., on the one hand, and points on the Delmarva Peninsula on the other; also locally on the Delmarva Peninsula and between Philadelphia and Camden, on the one hand, and Atlantic City and Ocean City, N. J., on the other. Experiments with collection and delivery service are being conducted in numerous other parts of the country; for example, in California, Arizona, the Pacific Northwest and in the Middle West.

To meet the present-day demand for door-to-door service, the container has been provided by a number of the railroads. These containers, which are loaded five to eight to a car, are handled by truck between the shipper's place of business and the railroad terminal. They have certain advantages, but are not adapted to many types of shipments. Truck body service has also been installed by certain carriers, and experiments with it are still in progress. This is designed to co-ordinate rail and truck service. It recognizes the railroads' greater efficiency in line haul, particularly for the greater distances, and the truck's greater advantages in terminal assembly and distribution.

Door-to-door service is also generally provided by independent forwarding companies. As such companies have been held to be shippers rather than carriers, their charges have not been subject to regulation and there have been frequent charges of discrimination in their operations. Express companies also furnish door-to-door service of l.c.l. freight in some instances by special arrangements with rail carriers. An illustration is the collection and delivery service furnished by the Southeastern Express and the Railway Express Agency in the Southeast.

Not a Traffic-Stealing Device

The service here proposed is not a device to take traffic from other rail carriers. In the opinion of the proponents, the other lines in the same territory should join in the experiment. In fact, proponents have all along offered to co-operate with the other lines in working out the details of an appropriate method of providing the service.

To the extent that collection and delivery service permits a line having little capital invested in terminal facilities to take traffic from a road which has at large expense provided such facilities, the proponents of this tariff believe that they have as much to lose as any other road. But shall they sit by and see further inroads made on their traffic by other forms of transport

for want of conforming their service to present-day commercial requirements? The fact is that all the rail carriers have lost traffic to competing forms of transportation, one important reason for which is believed to be that they have not furnished door-to-door transportation.

One of the most pressing matters of a transportation character relates to the co-ordination of rail service with the improved forms of transportation service now available by highway, air, etc. The managements of the lines here proposing collection and delivery service are confident that, with present facilities, their services can be quickened and co-ordinated with terminal trucking services so as to provide an effective method of transport with true economy from the standpoint of the shipper, the carrier and the public alike.

Need for Facts

If the commission does not, by its order, prevent proponents from proceeding with the proposed experiments, the results of the test of collection and delivery service in official territory should furnish an important contribution of facts on this subject, which is of the utmost importance. Discussion without experiment will establish little.

Rate reductions sometimes stimulate traffic and provide greater net revenue than would be earned in the absence of such reductions. The equivalent of rate reductions, which in effect is afforded by the provision of collection and delivery service at no extra charge, occurs in rates for the shorter hauls where present competition from trucks is most severe and where there is the best opportunity of recovering lost traffic. Furthermore, such experience as has been had indicates that numerous economies in terminal operations may be effected where freight is received and delivered to an important extent by a single agency rather than by numerous individuals. Even if the commission were to suspend the schedules and hold a hearing, its conclusions would necessarily have to be based upon probabilities as determined principally from opinion evidence.

In line with the modern theory of learning by trial and error, the tariff is frankly experimental; it is limited to expire December 1, 1934. No revenue loss can be suffered in one year's trial of the service which would not be more than compensated by the actual factual knowledge that will be acquired if the experiment is permitted to be made. Collection and delivery service has been discussed for many years and its advantages and disadvantages have been debated. Until it is actually tried, it will continue to be discussed on the basis of data inadequate to form a final conclusion. With one year's actual experiment, the commission and the carriers will be in a far better position than they would be if the issue were decided on the basis of speculative evidence as to probabilities. The expiration date in the tariff leaves the commission in full control of the situation and abundantly able to prevent any dissipation of the carriers' revenues.

Should Not Be Postponed

The experiment will not interfere with the co-ordinator's studies. He himself has stated that he would welcome the experiment. Finally, the experiment should not be postponed. Collection and delivery service has been talked about for a long time. The ancient contention that "this is not the time" has proved effective on many occasions. It is believed that this contention will always be advanced whenever the plan is proposed; it is one way of avoiding a discussion of the merits of a proposal. But it is not easy to deny the advantage of learning by actual experience what collection and delivery service will do for the railroads.

The railroads have frequently been reproached for failing to recognize changed conditions and to adapt their services and rate structures thereto. The report of the so-called Coolidge committee is illustrative of this attitude on the part of those who have dealt with the current transportation problem. Various governmental agencies, including the commission, have given much thought to its solution, but primarily their functions have been regulatory or advisory and the responsibility for initiative has remained with the carriers.

The instant proposal is frankly an experiment, but is one which has had sufficient trial and consideration to justify the belief that it will afford the public a desirable service and enable the carriers to regain and retain their l.c.l. traffic and institute economies in their terminal operations. The reputation of the managements of the companies proposing this service for sound and conservative traffic policies is well known, and is an assurance that the service would not be undertaken if they had not a reasonable prospect of success. Experiment teaches. Perfection need not be achieved at once. Doubtless experience will suggest improvements. The commission's jurisdiction is adequate protection against undesirable results.

Co-ordination in Britain*

By C. E. R. Sherrington†

IN Great Britain, we have ceased to be railway systems. We now regard ourselves as transportation concerns in the widest sense. To explain the British situation, one may deal, first, with passenger traffic, and it must be remembered that about 40 per cent of our total railway receipts are derived from passenger train traffic; in the case of the Southern, it is about 75 per cent. The average distance traveled is only 15 miles, and the average fare for all classes less than one shilling (24 cents) or about 0.75 pence (1.5 cents) per mile. Consequently, road competition is extraordinarily keen.

From the advent of the motor vehicle, the British railways have not been backward in realizing its use, and the first country bus service in England was run by the Great Western, about 1904. In general, however, the railways had no powers to operate road motor vehicles except for collection and delivery of rail-borne traffic, and an attempt to obtain such powers in 1922 met with such strong opposition that it had to be abandoned.

The general strike of 1926 so aided the competitive bus services that the four railways applied for full powers to operate, own, or obtain a financial interest in road motor vehicles for passengers and freight, and after a long drawn out and expensive legal fight the Railways (Road Powers) Act was passed in 1928.

Railways Bought into Bus Lines

By that date, however, road passenger services virtually covered the country, and the railways wisely began to acquire a financial interest in the various companies which formed part of the so-called Tilling-British Electric Traction Group, as well as in certain other independent companies. The four railways have collectively about eight million pounds invested in these allied bus operating companies, bringing in a return of about six per cent, the general principle being that the railway or railways concerned take a share equal to the largest other stockholder and appoint directors to the board of the operating company, and local co-ordinating committees are set up to insure close co-operation of service, facilities and so forth.

By this means, over 780 miles of unremunerative passenger services on branch lines have been withdrawn and a better service offered by the buses of the allied companies. Competition has by no means vanished, but one can claim that the situation is virtually stabilized. This is largely due to the passage of the Road Traffic Act of 1930, by which 13 area commissions were set up covering Great Britain. It is the duty of the commissioners to license all bus services and to do whatever is possible to prevent duplication of facilities and wasteful competition. Consequently, there are few newcomers in the bus operating sphere, and in general the small operator, when his vehicles become due for replacement, has found it better to sell out to the larger groups covering his area. In many such cases, these would naturally be the companies allied with the railways.

It will thus be seen that, so far as the public passenger service is concerned, the British railways are on the high road to stabilization. When prosperity returns to the community again, the railways should stand to gain much added revenues, and it seems hardly likely that the first cost, maintenance and running costs of the small private

* From an address before the Traffic Club of Chicago, on October 9.
†Secretary, Railway Research Service, London, Eng.

car can fall much further, though this latter must necessarily be a source of continued speculation.

On the freight side the situation has proved more intractable, though some degree of stabilization is likely to be obtained during 1934. The "Railways (Road Powers) Act of 1928" equally covered the handling of freight by road, but there were no nation-wide groups to negotiate with, and hence the railways were forced to extend their own use of the motor vehicle far beyond the radius of collection and delivery service which in cities is still conducted largely by the horse-drawn dray.

The guiding principle of the railways has been to carry anything anywhere at any time, and as fast as the vehicles have been acquired the services have been organized. During the last few months, orders for a further 500 vehicles, many of specialized types to handle livestock and furniture, were announced, and thousands of farms are now connected with railway stations by regularly operated road routes. The use of containers is also steadily extending, and when the present program is completed the L. M. S. alone will have about 5,000 of many different types.

Legislative Developments

On the legislative side, the most important events have been the setting up of the Salter Conference in the spring of 1932. With Sir Arthur Salter as independent chairman, the conference consisted of the general managers of the four railways and four representatives of the road transport operators. Pressed to report by July, 1932, their recommendations were unanimous, and, on the assumption that interest on capital previously sunk in the road system should be regarded as offsetting the community value of this road system, they concluded that the total annual road cost should be covered by the taxation of road vehicles, including the duty on gasoline.

The road transport representatives on this conference, though recommended to the minister by the responsible organizations, were promptly disowned by their colleagues, which shows the enormous difficulty of conducting negotiations with a disorganized industry. Nevertheless, the increased taxation recommendations of the conference were to some extent followed up in the national budget of last spring, and the recommendations toward control of the road freight operator have formed the basis for the Road and Rail Traffic Bill introduced last Easter, which has passed three readings in the House of Commons and has been read a first time in the House of Lords.

Part I of the bill provides for the licensing and regulation of road motor freight vehicles, a task which is to be entrusted to the chairmen of the existing area traffic commissioners. Road freight services will thus come under the same general regulation as passenger services, with the notable exception that there is to be no control of charges. The licenses are to be of three kinds, namely, type A for the public carrier's license, to be valid for 24 months and for use exclusively by those who carry the goods of others; a limited carrier's license, type B, which will be valid for 12 months and will be applicable to those carrying their own goods and the goods of others; lastly, there will be type C licenses for private carriers, namely, those who carry their own goods exclusively, valid for 36 months. To ease the period of change-over, public and limited carrier's licenses will be issued automatically up to a tonnage equivalent to that used by the road hauler for the year April, 1932, to 1933.

All vehicles are to be subjected to strict regulations with regard to their mechanical condition and safety requirements, in accordance with the provisions of the Road Traffic Act, which are now difficult of enforcement, and no licenses will be issued without certificates of fitness signed by the vehicle examiners, who have power to weigh the vehicles, and whose duty it is to study the journey records. There are also provisions for the setting up of an appeal tribunal of three persons. It is estimated that fees for licenses will cover the added cost of regulation.

In short, the new bill should bring about a degree of stabilization comparable to that which has been obtained in regard to passenger road transport. It will be seen that the method of regulation in Great Britain has been by way of licensing rather than restrictions imposed by heavy taxation, and it is not proposed to go into the latter question here.

Part II of the bill relieves the railways of certain antiquated restrictions in regard to charging powers dating back to the time when they held a virtual monopoly. Railways which are alone in a position to carry the bulk of a nation's trade cannot and should not be freed from all government control, but the proposed legislation permits the railway to make such charges as are agreed to by a trader, although other traders, if they feel themselves prejudiced, will possess the right of appeal to the railway rates tribunal.

Part III of the bill sets up a transport advisory council of over 20 members, on which all transport methods will be represented, as well as labor and the trading interests. This body will act in an advisory capacity to the Minister of Transport.

Conditions Have Changed

Railways until recently were able to claim a virtual monopoly of inland transport, and as a consequence were rightly regulated as to their charges. They were not allowed to indulge in undue discrimination as between areas or between shippers. Under such conditions, they cannot compete with the unregulated carrier on the highway or the inland waterway. The problem is definitely an economic one and should be regarded from an economic, that is to say a social, viewpoint, free from all railroad bias.

From that aspect it would appear undesirable to load a new, vital and enterprising industry with too onerous restrictions, yet the balance should be held evenly and no sure policy can be designed for the benefit of future generations without a judicious intermixture or regulation of the highway vehicle with a lessened degree of restriction on the carrier by rail. Our restrictions are being lightened but even so they were lighter than those of the American railroads.

The stage of improvement must necessarily be threefold: The assembly of data with regard to road traffic; the era of stabilization which will give a breathing space for the formulation of policy; and finally the dove-tailing of rail, road and water transport into a correlated whole.

In Britain, on the passenger side, the first two steps came together with the passage of the Road Traffic Act of 1930. The Road and Rail Traffic Bill of 1933 should bring about a similar condition for freight traffic, and 1934 should be the breathing space for which we have yearned so long. In the meanwhile, self-help has assisted us greatly; technical progress has reduced our expenditures and railroad depots; containers, store-door delivery, farm deliveries and through-transport by road has permitted us to offer a complete transport service of every kind to the shippers, whether we have to move farms, steam locomotives for export, household furniture or generating station machinery. On the L.M.S. alone, a recent check revealed that 80 per cent of the merchandise traffic handled was delivered within 24 hr. of our receiving it.

A Communication . . .

In Defense of the Ticket Agent

CHICAGO

TO THE EDITOR:

Constructive criticism is always highly desirable in any line of endeavor but it does not seem proper and fitting to let go unanswered criticism directed against the many thousand railroad transportation salesmen in the United States in the article entitled, "Is Railway Passenger Service Properly Sold?", which appeared in the *Railway Age* of September 30. All of the transportation salesmen of the country who study the article will derive considerable benefit from a careful analysis of the specific cases presented because, as they appear, they are certainly far from the standard of efficiency for which the railroads and the American Association of Railroad Ticket Agents have been striving.

We cannot, however, help getting the impression that the investigators were overly critical in their comparisons of railway salesmanship and salesmanship rendered in the offices of competing forms of transportation. For example, in the first case presented it is stated that the railroad salesman befuddled the prospect by presenting a confusion of figures, giving the impression that traveling by train is complicated while, on the other hand, the bus salesman volunteered a greater number of fares and more detailed information relative to schedules and equipment covering practically the entire western half of the country, without the prospect being confused. In the bus office, the prospect did not indicate his desires except to say that the window sign quoting a certain rate to Los Angeles had attracted his attention, and yet the bus case is cited as an example of high-powered solicitation.

In general, the article contrasts railroad selling with that of other industries. This is not fair to the railroad salesmen, for they are not schooled in the same manner as salesmen of other industries. Ninety per cent of other industries bring their salesmen up through the factory where they first become familiar with the manufactured article. They next pass through a school of instruction which brings out the fine points and attend regular meetings, which may occur each morning or less often. That bringing together of ideas is prevalent in any well formed sales organization. No two human beings are the same, but association of those of the higher type with those of the lower type will sometimes develop a personality or an ability which before such association lay dormant. The education of salesmen of railroad transportation, if we are to have more salesmen of the higher type, must begin with the encouragement of travel among the salesmen, for usually the man who sells travel knows nothing about his railroad except what he has heard or read. Since the rail salesmen who has traveled is much more convincing than one who has not, salesmen should be required to spend their vacations in travel. They also should be given a series of meetings once a month or if conditions prevent such frequency, less often but not less than three or four times a year. With adequate training, the improvement in sales will be surprising.

The value of education of salesmen through travel has been illustrated by the pre- and post-convention trips of this association, the improvement in sales made by members who have taken these trips being of some proportion. The salesmen who has traveled knows what there is to sell. It is the hope of this association that some day it will become the sales training bureau for the ticket salesmen as a whole and through the cooperation of traffic executives, who have always played a part in the organization, it may select a course of action which will be more beneficial not only to the membership but to the entire railway sales force. Through this organization, its officers have been able to inspire its members to such an extent that they show more interest and courtesy to those whom they serve.

The article says, "The public does not know what the railroads have to sell." This may be true in some respects, but a goodly share of the public is being educated in what the railroad has to sell through literature distributed at public schools, through the accommodation displays of the Pullman Company and through the display of new railroad equipment at points along the line. Since the public is familiar with many phases of railroad transportation, it would not be wise for the ticket salesmen to tell each passenger of the many services they and their companies are willing to render, for the customer would be bored with a recitation of what he already knows. It is natural for the ticket salesman to listen to the story of the prospective patron and then to try and find a remedy for the case. However, as the article indicates, one of the greatest problems confronting the salesmen is the passenger who steps to the counter and not wishing to show his or her ignorance of travel before other patrons at the counter, withholds the actual questions he or she has come in to ask, and thereby does not give the ticket salesman an opportunity to give the fullest service he is capable of rendering. Were it possible to design railroad ticket offices that would insure more privacy and thus encourage the patron to talk, this problem would be solved and the advantage enjoyed by tour companies, air lines and some raliroads which have facilities in which the prospects may sit at a desk and express themselves without humiliation, would be eliminated, and railroad salesmen could perform their work more effectively. This privacy is not mentioned as the sole advantage which salesmen of competing forms of transportation enjoy over railway salesmen. In addition, there is the fact that a subsidized service is easier to sell than a service which must operate at a rate that will cover the cost of the service and a profit.

We agree with this article that the ticket salesman is the contact between his company and the patron. It is the impression made on his first contact which influences him after he has left the office and encourages him to return and become a regular patron of the railroad. The creed of the association bears this out.

An accurate portrayal of the efficiency and accomplishments of the ticket agents and the American Association of Railroad Ticket Agents cannot be written in few words. This reply to the article referred to is only to let the officers and employees of the railroads know that the members of the association are not entirely in accord with the article, which does not mention the examples of expert salesmanship that occur every day. The record of salesmen as a whole over a period of time speaks for itself.

AMERICAN ASSOCIATION OF RAILROAD TICKET AGENTS.

Odds and Ends . . .

Carnegie Medal for Pennsylvania Conductor

Edward C. Hodgkiss, freight conductor on the New York division of the Pennsylvania, has been awarded a Carnegie Hero Fund medal and $1,000 in recognition of his heroism in saving the life of a child at Linden, N. J., in the summer of 1931. While in charge of a ballast-cleaning train, Mr. Hodgkiss leaped onto the main track and carried a four-year-old boy to safety an instant before a Washington-New York passenger train passed the spot. For this act, he was also awarded the Pennsylvania Railroad Heroic Service medal by President W. W. Atterbury.

"Danger—Grade Separation"

If it is true that it is news when a man bites a dog, then this action of the North Dakota Railroad Commission must deserve a like classification. The commission, acting upon a petition of residents of Wabek, N. D., ordered the abandonment of an underpass under the track of the Soo Line at Wabek and the installation in its place of a grade crossing. Reversing the usual order of things in cases of this kind, the commission held that "there is no question that the underpass is much more hazardous than a grade crossing will be."

Canada's Candidate

The Canadian National has come forward with a noteworthy candidate in the competition for international honors for absent-mindedness among railway passengers. L. L. Grabill, general baggage agent of the railway, thinks that first prize should go to the young woman who recently traveled in a Canadian National train from Winnipeg, Man., to Toronto, Ont. She walked out of the train at Toronto in her bedroom slippers, leaving her street shoes under her berth. The story came out when, in blushing confusion, she applied at the lost and found bureau for the missing footgear.

News Department begins on next left-hand page

REPAIR or REPLACE ?

Your profits will not increase if you repair obsolete locomotives. • Replace obsolete locomotives with Super-Power and watch your profits grow!

LIMA LOCOMOTIVE WORKS INCORPORATED

LIMA, OHIO

NEWS

Proposed Trucking Code Arouses Much Opposition

Objections of the various interests voiced at hearings held on November 16 and 17

Objections by representatives of farm organizations to regulation by N. R. A. code of the use of trucks owned by farmers or used for the transportation of agricultural products, opposition by representatives of various organizations of shippers to the regulation of truck rates by code authorities, and demands by labor organizations for shorter hours and higher wages than those proposed, featured the hearings held on November 16 and 17 at Washington, before Division Administrator Malcolm Muir and Assistant Deputy Administrator E. E. Hughes, of the National Recovery Administration, on the code for the trucking industry presented by the American Trucking Associations, Inc., as revised in preliminary conferences with administration officials. Various separate branches of the industry, such as furniture movers, contractors, and local hauling companies, also objected to many of the provisions of the proposed code. The code was presented at the opening of the hearing by Ted V. Rodgers, president of the association, who estimated that it would affect 3,500,000 trucks and probably 5,000,000 employees.

S. S. McCloskey, representing the National Grange, asked that trucks owned by farmers and trucks engaged in hauling farm products to market and supplies for farmers be excluded from the provisions of the code, saying that 20 per cent of all trucks are on the farms and that to include them would add another burden to the farmers. He urged that this phase of the trucking problem be left to the Secretary of Agriculture and the Agricultural Adjustment Administration. Former Senator Smith W. Brookhart, of Iowa, also took a similar position, speaking for the National Farmers' Educational and Co-operative Unions and the American Farm Bureau Federation, as did a representative of the National Co-operative Council.

W. H. Watts, for the National Industrial Traffic League, submitted the position of the league as approved at a recent meeting in Chicago, that private truck operators should have the option of coming under general code or the code of the particular industry in which they were involved, and opposing any provisions regulating rates. From the beginning, he said, the league has opposed statutory or legislative rate-making and he contended that maximum reasonable rates should be determined by conditions in the industry and not made with relation to rail rates. J. E. Murphy, industrial adviser, asked if it was not a fact that the league desires to have the opportunity to "chisel" any kind of rates its members could get from truck operators. Mr. Watts replied that he could not say that was a correct statement although undoubtedly there is some "chiseling." Charles W. Holman, representing the National Co-operative Milk Producers' Federation, objected that the code would authorize natural or territorial divisions of truck operators to fix rates without consulting with the shipper and that "it is proposed to ask government sanction for the establishment of a trucking trust." M. E. Robinson, Jr., for the National Retail Coal Merchants' Association, contended that trucking operations of retail coal dealers should come under their code rather than a trucking code, while a representative of the Associated General Contractors asked that trucks used in construction work be eliminated.

Labor provisions of the code were attacked by E. L. Oliver, of the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees, and by Daniel J. Tobin, of the International Brotherhood of Teamsters and Chauffeurs.

Two Million Passengers Have Used B. & O. Train-Connection Services

The Baltimore & Ohio, on November 21, carried its two millionth passenger in the train-connection motor coaches, operating between its various off-track stations in New York, and its terminal in Jersey City, N. J. The motor coach operations, which were inaugurated seven years ago, now serve three off-track stations on Manhattan Island and, in addition, pick-up passengers at various hotels.

Suspension of Reduced Canned Goods Rate Cancelled

The Interstate Commerce Commission has voted to cancel the suspension order issued by Division 2 as to tariffs of the transcontinental railroads reducing from 90 to 80 cents per 100 lb. the rate on canned goods from Pacific coast territory to the territory between the Rocky mountains and a line from Detroit, Mich., to Mobile, Ala. The commission acts on a petition of the railroads that their hands be not tied, since the reduction was proposed to meet a reduction to 76 cents put into effect by Panama canal lines in conjunction with railroads serving the Gulf ports.

British Railways Acquire Large Trucking Companies

Action is called a most important step in the co-ordination of freight services

The four British railways on October 31 concluded negotiations for the acquisition of two of the oldest and most important highway freight-carrying companies now operating in Great Britain. The cartage companies involved are Carter, Paterson & Co. and the Hays Wharf Cartage Company, the latter being the owner of Pickfords, Ltd. "The arrangement thus concluded," says an official statement "is perhaps the most important step hitherto taken in this country in the direction of co-ordinating rail and road services for parcels and goods traffic." The acquisition was effected by the purchase in equal proportions by the four railway companies (the London, Midland & Scottish; the London & North Eastern; the Great Western; and the Southern) of all of the ordinary capital shares of the cartage companies.

An article reporting the foregoing in a recent issue of Modern Transport (London) suggests that "The present step, no doubt, indicates the policy which the railway companies will pursue in the future in connection with the larger goods carrying undertakings." This article notes further that Carter, Paterson & Co. has specialized in the handling of parcels whereas Pickfords deals with heavier and bulkier freight, including furniture moving. The former operates express delivery services to all parts of London and surrounding counties and also acts as forwarding agent to all parts of the world, having 180 agents in Great Britain and in other countries; Pickfords has more than 100 branches in London and throughout the British Empire.

Because the transport facilities of these cartage companies, "extending in certain instances over a period of nearly 200 years, are unique in many respects", the railways, their official statement says, plan to preserve the individuality of Carter, Paterson & Company and of Pickfords. In this connection the statement continues to say that "every effort will be made to co-ordinate their facilities with those of the railways so that, by avoiding wasteful competition and pooling all available resources, the maximum degree of efficiency in the two forms of service can be attained."

The chief executive of each of the four railways will represent his company on the boards of directors of the newly-acquired cartage companies.

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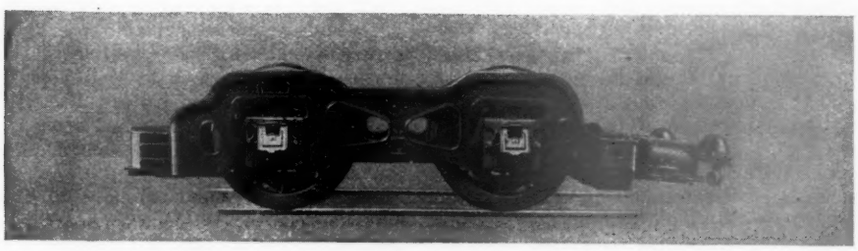
COMFORT ATTRACTS PASSENGERS

De Luxe equipment, air conditioning, and extra service is winning back to the railroads those travellers who prize comfort.

Greater comfort is the railroad's chief competition weapon in the battle against other modes of transportation.

But a single rough, jolting start will more than offset your other efforts at increasing comfort.

To insure easy starts, many of the country's most famous trains employ Booster-equipped locomotives. Their extra starting power avoids shocks and adds the final touch to de Luxe travel. The Locomotive Booster is a vital element in building and holding passenger business.



FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK CHICAGO MONTREAL

I. C. C. Hears Argument on Door-to-Door Tariffs

Oral presentations of proponents and protestants made on November 21

Oral arguments were heard by the Interstate Commerce Commission on November 21 on the question as to whether it should suspend the storedoor collection and delivery tariffs filed by the Pennsylvania, the Erie, and the Grand Trunk, to become effective on December 1 for an experimental period of a year. Suspension was asked by 17 other roads in official classification territory, the American Highway Trucking Associations, Inc., and others, who attacked the legality of the plan proposed and also urged that the experiment be postponed until after Co-ordinator Eastman has reported his recommendations on the subject.

The opening argument was made by H. W. Bikle, general counsel of the Pennsylvania. J. F. Eshelman, speaking also for the Pennsylvania, told the commissioners that the plan proposed would permit marked economies by enabling the concentration of l.c.l. freight in the larger cities at single stations, reducing the shifting of cars and rehandling and making possible better carloading. "It is our considered opinion," he said, "that collection and delivery service can be made to more than pay for itself. The present proposal is not being suggested as the ultimate solution and it is expected that some reshaping will be required but the company is convinced that it can perform mass transportation more cheaply and efficiently and that with the special knowledge of the truckers in terminal handling a real co-ordination can be effected. The shipper can arrange for a complete transportation service with one agency and be assured of more stable rates and less discrimination than now exists. Mr. Eshelman said he was amused at the way the truckers are worrying about discriminations in this case and that "our service will be 100 per cent simon-pure as compared with the discriminations now prevailing." He also pointed out that the plan does not disturb the existing class rate structure and said that it was better than the plan of making allowances to the shippers for trucking "because it makes the location of our stations a matter of our business rather than that of the shippers." Considering the necessity for the action of many states as well as of the federal government he said it is probable that a long time must elapse before there is a stabilization of truck rates and that it seems unreasonable for the truckers to demand the right to compete under a minimum of regulation but to object to the railroads' competing under a plan of full regulation. If the costs of the truckers go up as the result of the N. R. A. code, he said, those of the trucks with which the railroads will contract for the terminal service will also go up under the code.

M. B. Pierce, speaking for the Erie, said it is proposed to have the service handled entirely by outside truckers who would be subject to the N. R. A. codes.

R. J. Lehman, appearing on behalf of the protesting railroads, said that the primary legal basis for their protest was the duty of the commission under Section 15a to prevent unnecessary waste of railroad revenues. He said it had been estimated that the proposed N. R. A. truck code would eliminate 75 per cent of the "wildcatters" and that it is reasonable to assume that the co-ordinator would recommend a scheme entirely different from that proposed by the Pennsylvania, possibly a common agency to perform storedoor service. Commissioner Meyer asked if a week or a month of actual experimentation might not be better than months of speculation and when told that the experiment should await the co-ordinator's report he asked if that meant "when the co-ordinator reports to us or when we have made our report on his." Mr. Lehman said it would be a very unwise and costly experiment but in reply to Commissioner Mahaffie said that if the commission allows the tariffs to become effective the other roads will feel obliged to take similar steps to protect their own traffic.

Harold S. Schertz, of Philadelphia, presented the argument on behalf of the trucking association, which had filed a lengthy protest saying that the highway carriers had co-ordinated their operations with rail, water, and air carriers, beyond the knowledge and realization of the rail carriers, and that "by the proposed tariffs these three lone carriers would seek to destroy these highway carriers who for so long have faithfully served them, and to disrupt the methods upon which the shipping public has become dependent." It was contended that the proposed maximum six cents charge is insufficient to cover the expense of the service rendered and would, therefore, even for the longer distances, reduce the ton-mile revenue accruing for the rail haul.

Express Rates on Strawberries Further Reduced

After a reargument the Interstate Commerce Commission has ordered reductions in rates on fresh strawberries, in carloads, in express service, from points in Florida to destinations in southern, southwestern, central, and western trunk line territories greater than the reduction previously ordered by Division 5. Whereas Division 5 has found that the rates in express service would be unreasonable to the extent that they exceeded 120 per cent of the first-class freight rates to and from the same points, minimum carload 17,000 lb., the commission, with three members dissenting, has now found that such rates for the future will be unreasonable to the extent that they exceed 105 per cent of the first class rates. It has also ordered reductions in the standard refrigeration charges on strawberries in express service, which Division 5 had found to be not unreasonable; and in the rates for freight service on the basis of 65 per cent of the first-class freight rates, whereas Division 5 had approved first-class rates for such service. Commissioners Miller, Mahaffie, and Farrell dissented in part.

Some Progress in P. W. A. Railway Loan Discussions

Forward movement, however, is slow so far because of complicated details involved

Progress is being made in negotiations between the railroads and the Public Works Administration as to the conditions on which loans will be made to them for the purchase of rails and equipment or for maintenance work and it is stated that many railroads have shown interest in the matter and in the possibilities of creating additional immediate employment and increased purchasing power in many localities. The progress, however, is somewhat slow so far because of the many complicated details involved. It is understood that the question of the extent to which the labor restrictions of the national industrial recovery act are applicable is causing more discussion than the question of security, as the government is anxious to make a considerable number of railroad loans and is willing to make favorable terms, and that it is probable that collateral for the promissory notes which the railroads are to give for loans for rail purchases will not be required in most cases.

The Public Works Administration has issued a press statement saying that Frank C. Wright, director of the recently created Transportation Loan Division, has reported to Administrator Ickes that progress has been made in discussions with railroad officials looking toward loans from the public works fund but that the names of individual roads with which negotiations have been conducted will not be announced until the negotiations result in definite allotments. This statement emphasized the opportunities for loaning money on security to be used for repairing locomotives and freight cars that have long been out of commission and awaiting repairs and it is understood that the question of the labor restrictions does not apply to such work or to the use of rails, where the railroads employ their own forces, as it does in the case of contracts to be made by railroads with others for furnishing equipment and materials. In such cases the requirements of the N. R. A. codes applicable to the various industries are expected to govern but as to some the codes have not yet been adopted.

"Many railroad shop towns have been black spots on the unemployment map, for all roads have been forced to cut repair work on motive power and rolling stock to the bone for the last three years," according to the P. W. A. statement. "Many shops have been closed down entirely for long periods, while others have operated on part time basis. This has been the cause for deep concern on the part of rail managers, who have given their shop men all the employment possible with the funds at their command."

"By deferring repairs that should have been made," it was further stated, "the railroads have built up a large backlog of employment, indicated by the fact that on Jnauary 1, 1932, the Class I carriers

Continued on next left-hand page

Do You Remember ?

Remember years ago when Arch Brick came in slabs that took two men to carry? American Arch Company developed the sectional brick that replaced the old form.

Remember years ago when Arch Brick was an uncertain gamble, some was good and a lot was not? American Arch Company made an intensive study of combustion conditions and their relation to Arch Brick composition and took the guess out of Arch Brick.

Remember years ago when you ran out of needed shapes and sizes and yet found the storeroom full of Arch Brick? American Arch Company organized a service of supply that corrected such conditions and assured you plenty of Arch Brick when and where needed, without permitting the accumulation of obsolete stock.

In the 25 years American Arch Company has been serving the railroads, it has removed Arch Brick from the list of things to worry about.

There's More to Security Arches Than Just Brick

HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists

NRA MEMBER U.S. WE DO OUR PART

AMERICAN ARCH CO.
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Locomotive Combustion Specialists » » »

had only 6,990 locomotives out of service and undergoing or awaiting repairs, while by July 1 of this year the number had increased to 11,203, or more than 22 per cent of all locomotives owned by Class I roads. To replace the locomotives taken out of service to await repairs the roads have drawn on the reserves of serviceable engines that are kept stored away to meet emergencies. On January 1, 1932, the Class I roads had 10,982 serviceable engines in storage, but on October 1 of this year that number had been cut nearly in half, to 5,522.

"The total number of serviceable locomotives of Class I roads, both in active use and in storage, declined from 46,657 on January 1, 1932, to 39,299 on October 1st of this year, according to reports of the American Railway Association.

"A further indication of the size of this backlog of accumulated employment in railroad repair shops is the fact that the number of freight cars of all descriptions awaiting or undergoing heavy repairs increased from 61,287 on January 1, 1932, to 231,768 on August 1 of this year.

"Railroad shop activity has been picking up since midsummer, but the amount that individual roads have been able to spend on both current and deferred repairs has been limited by the revenues of each. Little money has been borrowed for that purpose. The necessity of remaining within the limits of budgets that are governed from month to month by revenues is causing the closing down of many shops for a number of days each month at the time of year when the earnings of employees should be largest.

"Monthly reports of the American Railway Association on the condition of locomotives and freight cars indicate that while current repair requirements are now being met, little has as yet been done to reduce the amount of equipment that has been stored for repair. Between August 1 and October 1 the number of freight cars awaiting heavy repairs was cut only 3,491, from 231,768 to 228,277.

"Between July 1 and October 1, the number of locomotives awaiting or undergoing repairs was cut by only 468, from 11,203 to 10,735. That many more engines should have been put into running order during those three months is indicated by the fact that to meet the demands of increased traffic, the Class I roads were forced to take 1,220 serviceable engines out of storage and put them to work. This left the Class I roads on October 1 with only 5,522 serviceable engines in storage for use when needed.

"It is essential," Mr. Wright reported to Administrator Ickes, "that the roads have enough serviceable locomotives and freight cars to take care of the increased traffic that they must be prepared to handle. Loans of Public Works funds to carriers will enable them to get ready for this increased business while at the same time moving men off of relief rolls onto pay rolls.

"Money borrowed by carriers for repair work can be converted into immediate employment, for repair jobs do not involve the drawing up of elaborate plans, specifications and contracts; advertising for bids and awarding contracts, and other delays that are unavoidable on construction projects carried on by the federal government and municipal authorities under the accumulation of controlling laws.

"Negotiations necessary to clearing away details and closing these loans are moving forward rapidly," Mr. Wright reported to Administrator Ickes; "and in the meantime, plans are being perfected by the borrowing roads, steel companies and other material manufacturers for getting men back to work immediately."

As a result of the decision reached by Co-ordinator Eastman not to allocate the proposed rail orders himself the railroads are being allowed to place their own orders, subject only to the condition that the rail be bought at the cheapest place from the standpoint of cost at point of use. Where the costs are equal the roads may divide their orders among the steel companies as they deem proper but it is the desire of the government, in view of the fact that its efforts resulted in a reduction in the price of rails, that the orders be distributed in such a way that the companies will have no cause to complain of unequal distribution.

Southwestern Roads Protest Barge Line Extension

The southwestern railroads have filed with the Interstate Commerce Commission a statement of objections to the application of the Mississippi Valley Barge Line for authority to extend its operation to the intra-coastal waterways of Texas and Louisiana and for an order requiring the railroads to join in joint rates and through routes.

Reduced Rates for Food Relief

In response to the request of Harry L. Hopkins, head of the Emergency Relief Administration, for a 50 per cent reduction in freight rates on shipments of food and other supplies by the administration for relief purposes, the railroads, after several conferences, have agreed to make reductions averaging about 33⅓ per cent, although there are some regional variations based on the practices of publishing land-grant rates on government shipments.

Rock Island Trustees Appointed

James E. Gorman, president of the Chicago, Rock Island & Pacific, Frank O. Lowden, former governor of Illinois and Joseph B. Fleming, a member of the law firm of Kirkland, Fleming, Green & Martin, were appointed temporary trustees for the Rock Island by Federal Judge James H. Wilkerson at Chicago on November 22. The men were selected from a panel submitted by the Interstate Commerce Commission.

Wreck on French State Railroad

On the State Railway of France, October 24, the 6.10 a.m. express train, from Cherbourg to Paris, was derailed near Evreux, while going full speed, and 30 passengers and 7 other persons were killed; 80 or more persons were injured. The locomotive and first three cars fell down a bank and lodged partly in a stream. Press dispatches mention the bridge over the stream, but the derailment appears to have occurred before the engine reached it. The Railway Gazette (London) says that the cause had not been discovered, but that "it must have been from purely local and unforeseeable difficulties, for the general excellence of maintenance, both of the roadway and the rolling stock of the State Railway, normally provides a liberal margin of safety."

A.R.E.A. Meets March 13-14

The board of direction of the American Railway Engineering Association, at a meeting on November 8, decided that the thirty-fifth annual convention of this organization shall be held at the Palmer House, Chicago, on March 13-14, thereby continuing the program of curtailed activities that has prevailed during the last three years. As in these recent years, the association will hold an evening session on Tuesday; and a luncheon, with a speaker of prominence, on Wednesday.

Hudson River Bridge Not Approved

The Secretary of War, George H. Dern, has declined to approve the plans presented by the North River Bridge Company for a proposed bridge across the Hudson River at Fifty-Seventh street, New York City, on the ground that it would interfere with navigation in the river and would come into direct and powerful competition with the tunnel at Thirty-Eighth street, for which the New York Port Authority has borrowed a large sum from the federal government.

Club Meetings

The Pacific Railway Club will hold its next meeting at the Transportation Club, Palace hotel, San Francisco, on Thursday evening, December 14. This will be the annual entertainment, with music, refreshments and a play.

The Railway Car Men's Club, of Peoria and Pekin (Illinois), will hold its next meeting on Friday evening, December 15, in the Union Station, Peoria. This will be question and answer night.

The Indianapolis (Ind.) Car Inspection Association will hold its next meeting at the Severin hotel, Indianapolis, on Monday evening, December 4. There will be a general discussion of the interchange rules.

Railroads Make Concessions on Relief Shipments

Western railroads have agreed to make freight rate concessions ranging from 35 to 40 per cent on federal relief shipments made during the coming winter. In an announcement by the Western Association of Railway Executives, H. G. Taylor, chairman, said, "At a conference with Harry L. Hopkins, administrator of the Federal Emergency Relief Administration, in Washington, it was agreed that the western railroads would apply land grant and federal bond aided rates to all shipments moved by the Emergency Relief Administration or the Federal Relief Surplus Corporation, the railroad waiving any legal questions involved. It is estimated that this will result in an average reduction throughout the West of from 35 to 40 per cent from commercial rates. This arrangement will be in effect on practically all the railroads in the West as those not subject to land grant or bond-aided obli-

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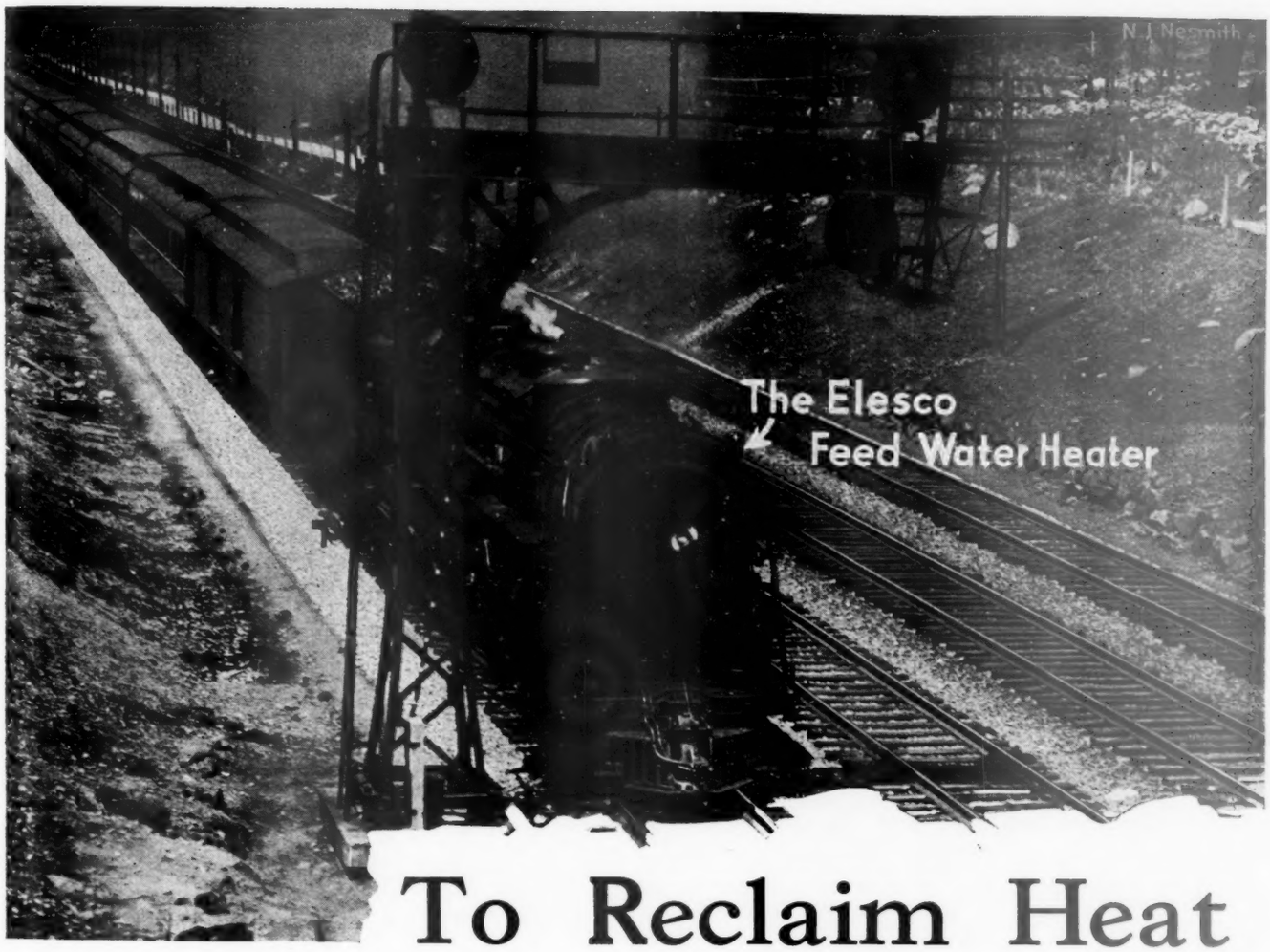

To Reclaim Heat

Is to Economize

Railroad men know generally that more heat is exhausted up the stack of a locomotive than goes into useful work in transferring energy at the drawbar. Consequently, an important step towards economy is to save or reclaim as much of the heat being lost in the exhaust steam as possible . . . and there is no better medium for doing this than through the feed water, preheating it in an Elesco feed water heater.

In an Elesco feed water heater the feed water is pumped through a nest of small tubes that are surrounded by a portion of the *waste* exhaust steam, from which the water picks up as much of the heat as possible on its way to the boiler. By this simple process of returning heat to the boiler that otherwise would be wasted, several economies are effected, including: *increased* sustained boiler capacity, *increased* cylinder horsepower, *increased* overall boiler efficiency, and substantial savings in fuel and water — ranging from 12 to 15 per cent.

Such economies are being made on nearly 4000 locomotives through heat reclamation by Elesco feed water heaters.

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New York

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Canada: THE SUPERHEATER COMPANY, LTD., MONTREAL

gations are parties to an equalization agreement which spreads such rates to competing lines. Mr. Hopkins accepted the proposal and expressed his appreciation for the co-operation of the western roads."

The presidents of the eastern railroads, acting on the request of Mr. Hopkins, have agreed to make a general reduction of 25 per cent on freight charges on foodstuffs and some other articles, shipped by the government for the unemployed.

Correction

In the *Railway Age* of October 28 on page 588 in Table II, the maintenance expenses of the Grand Trunk Western for the first eight months of 1933 as compared with the average for the same period in the years 1925-29 were incorrectly stated. The average maintenance of way expenses for the first eight months of 1925-29 should have read $3,085,617, and the decrease this year from that figure was 46 per cent. The 1925-29 average of maintenance of equipment expenditures for the period was $3,884,634 and the decrease this year 42 per cent. The error arose from the fact that several subsidiary companies were reported separately in the 1925-29 period whereas, this year, the figures for the Grand Trunk Western included them.

Safety Sermon for December

The committee on education, of the Safety section of the A.R.A., (L. G. Bentley, chairman) is circulating, for December, a placard bearing two large pictures, showing the wrong and the right way of stepping off the footboard at the rear of a locomotive; and no text is being issued, except the brief admonitions printed on the poster.

To step off in the middle of the track is to risk getting a bad foothold, if the engine is moving, there being practically no time whatever to see where one is going to land. If the surface be uneven or slippery, there is no time to protect oneself. The proper thing is to step off at the side; "a good habit to acquire regardless of whether the engine is moving or not," says the committee.

N. R. A. Codes

The American Iron & Steel Institute has sent to the National Recovery Administration a resolution expressing its "general satisfaction" with the operations of the N. R. A. code in its effects on the industry and requesting that the so-called "trial period" be extended to May 31, 1934, "to the end that sufficient time may be given more fully to demonstrate that the provisions of the code will effectuate the purposes of Title I of the National Industrial Recovery Act." The extension was granted.

The proposed code for the coal dock industry, as revised has been set for hearing on November 15 and that for the Great Lakes shipping industry has been assigned for November 28.

The President has approved the code for the air transport industry, effective November 27. It does not affect pilots, whose wages and hours are being considered by a fact-finding committee named after a dispute between the pilots and the air lines was carried to the National Labor Board.

1.5 Cents Per Mile Coach Fares Proposed in South

Reduced passenger rates, bringing the fare for coach travel down to 1.5 cents per mile, will be inaugurated December 1 by the Southern and the Seaboard Air Line. At the same time the Southern will reduce its Pullman rates to three cents a mile, with the surcharge eliminated, while the Seaboard plans a three cents per mile rate for one way travel in Pullmans, a reduction to 2.5 cents per mile for round-trip Pullman tickets with a 30-day time limit and to two cents per mile for round-trip Pullman tickets with a 15-day time limit. The new fares will be effective for an experimental period of six months. The Seaboard Air Line had previously announced that it planned, on December 1, to reduce fares for travel in coaches to two cents a mile.

Central Western Board Meeting

The twenty-ninth regular meeting of the Central Western Shippers' Advisory Board will be held in Pocatello, Idaho, on December 14. The docket for the meeting includes a discussion of the following: What the federal co-ordinator has done and proposes to do; the highway transportation code as it affects shippers and its relation to the co-ordination of all transportation agencies; various changes in packing requirements under Consolidated Freight Classification No. 8, and plans for financing agriculture through the Farm Credit Administration. In addition, consideration will be given to the federal co-ordinators' questionnaire pertaining to the regulation of competing forms of transportation, co-ordination of all agencies of transportation, regulation of interstate motor carriers, regulation of domestic water lines and relations of industry to transportation.

Freight Traffic in September

The volume of freight traffic handled by the Class I railroads in September showed an increase of 15.1 per cent above that of the same month in 1932, according to reports compiled by the Bureau of Railway Economics. Freight traffic in September amounted to 26,130,010,000 net ton-miles, compared with 22,708,940,000 net ton-miles in September, 1932, an increase of 3,421,070,000 net ton-miles. Compared with the same month in 1931, however, the volume of freight traffic in September this year was a reduction of 1,711,574,000 net ton-miles, or 6.1 per cent. In the Eastern district freight traffic in September was an increase of 20.5 per cent compared with the same month in 1932, while the Southern district reported an increase of 9.2 per cent, and the Western district an increase of 9.8 per cent.

Freight traffic in the first nine months of 1933 amounted to 202,731,510,000 net ton-miles, an increase of 12,924,899,000 net ton-miles, or 6.8 per cent, over the corresponding period in 1932, but a reduction of 59,090,963,000 net ton-miles, or 22.6 per cent, under the corresponding period in 1931. Railroads in the Eastern district for the nine months' period reported an increase of 8.7 per cent, while the Southern district reported an increase of 7.9 per cent. The Western district reported an increase of 3.7 per cent.

M. J. Gormley Addresses Traffic Club of New York

That the study of the transportation situation now being made by Federal Co-ordinator Joseph B. Eastman will be one out of which will come something definite to work on, was the hope expressed by M. J. Gormley, president of the American Railway Association, in his November 21 address at the noon-day forum meeting of the Traffic Club of New York. The railways, Mr. Gormley said, expect to file with the co-ordinator a complete brief outlining regulatory legislation which they think is required to bring about equitable conditions in the transportation field.

In his address Mr. Gormley undertook to answer critics who claim that the railroad machine is obsolete and that if we are to have a revival of business there would be great difficulty in moving the commerce of the country. The complete answer to this criticism, the speaker said, is the fact that in 1929 the railroads handled the heaviest traffic in history without car shortage, congestion, or transportation difficulties of any kind. "With equality of opportunity extended to all transportation agencies," he continued, "the superiority of the railroad as a transportation machine will again be obvious to everyone. If under such equality of treatment the railroads cannot survive, you may be sure they will be the first to admit it."

Progress in Canadian Wage Settlement

The maintenance of way employees of the Canadian railways have agreed to a "deduction" of 15 per cent from basic rates of pay, effective for one year from December 1. The railways had contended for a 20 per cent deduction.

In recommending acceptance of an additional 5 per cent reduction (under the existing 10 per cent) in the wages of clerks of the Canadian Pacific, who come under the agreement between the company and the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station employees, the action has also the effect of committing unorganized clerical employees to the same reduction.

The application of the wage cut to the non-agreement employees, who comprise all general office workers throughout the system, is automatic, George Hodge, manager of the personnel department of the C. P. R. stated. "All arrangements that are concluded between the company and the agreement employees are automatically applied to the non-agreement employees in order to preserve a uniformity throughout the system," he said.

Attempts to compromise on a 15 per cent wage cut for clerks of the Canadian National last week failed, when following a meeting between executives of the Canadian Brotherhood of Railroad Employees, representing the employees, and of officers of the C. N. R., it was decided

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POWER

AMERICAN LOCOMOTIVE COMPANY

"And here is the last word in steam locomotive construction, the Union Pacific 9000 Class freight and passenger locomotive. When bigger steam locomotives than this are built, railroads will have to ream out their tunnels. Designed primarily for fast freight service, the 9000's are used on exceptionally heavy passenger trains, and, like the 7000's, *their doom may be sealed* by the coming of the newer, lighter, high-speed train just ordered."

The above is quoted from a pamphlet recently given wide distribution. The italics are ours.

The 9000 Class engine referred to handles from 85 to 100 loaded fruit cars at 60 miles per hour — not 1 or 2 cars but 85 to 100. It delivers not 600 horsepower but 5000 continuous horsepower. It is the most economical power unit ever thought of for this particular job.

Ambition is a wonderful thing, and it should and must be encouraged. But it must be tempered at least with a little horse-sense.

No doubt, some day, some time, the 9000 Class engines will be obsolete. But at the present, the records made and being made by these engines, as revenue producers, make us mighty proud to have our name connected to them as their builder.

We are reminded of the remarks made by Mark Twain when his attention was called to a publication which carried his obituary. He stated, "The report is very much exaggerated".

30 CHURCH STREET · NEW YORK · N·Y·

We are prepared to submit streamlined designs, steam or diesel powered as desired, to meet any or every demand of our railroads.

to refer the matter to the next session of the board of conciliation at Ottawa. The company originally reduced the wages of clerks in all departments by an additional 10 per cent. Concerted protest by the Brotherhood to an additional 10 per cent reduction led to the compromise offer of 15 per cent on the whole.

Road Transport Conference Called in Canada

December 14 has been set tentatively by Hon. Dr. R. J. Manion, Minister of Railways and Canals, as the date for the conference in Ottawa between the Dominion and provincial governments of Canada to discuss possible means of regulating motor competition with the railways. Among the subjects to be discussed will be publication of rates, insurance, uniform accounting, working conditions, safety restrictions and certification.

In view of the fact that the conference will be advisory only and that decision on the questions will rest finally with the provinces it is understood that only written representations will be received from the various parties at interest. The conference will be open to the public.

Dr. Manion's statement follows in part:

"The proposed conference arises out of the recommendations of the Royal Commission on Railways and Transportation which suggested that the federal and provincial governments in co-operation should examine the question with a view to equalizing the conditions under which road and rail transport is carried on and to securing uniformity of action throughout the Dominion. Subsequently the suggestion came before the Dominion inter-provincial conference in January last, at which time it was agreed that when the data to be supplied by the provinces had been assembled and studied a conference of the appropriate officials of the Dominion and the provinces should be called to consider the whole situation.

"As to the scope and powers of the conference, I would call attention to the fact that, under the constitution of Canada, regulation of road transport within each province falls within the exclusive jurisdiction of provincial authorities. This was pointed out by the Royal Commission in their report but to avoid possibility of misunderstanding I desire to emphasize the fact that, in view of the questions of jurisdiction and authority involved in the matters to be discussed, the conference can only be consultative and advisory in character."

Selling Katy Box Cars Creates Good-Will and Employment

Unusual enthusiasm has attended the sale of worn out box cars to farmers and others by the Missouri-Kansas-Texas, the sale this year creating additional employment and stimulating buying. In dismantling 1,400 out-of-date cars this year, 75 furloughed employees have been called back to work on the program which will extend over three months. "Twenty truckers have applied for the job of moving the cars to the farms," remarks the Parsons Daily Sun, in an editorial commenting on the reclamation program, "and each truck requires two men. That is employment for 40 additional men. Many of the cars are remodeled when then get to the farms. They are set up on concrete foundations to furnish a hog shed below and feed storage above, sheds are built against them, they are made into chicken houses and hog houses and everything else that a farmer needs in the way of barn or storage room. Most of them are painted on the farms and every time a farmer remodels or remakes or paints, he buys some material with which to do the work. That means business."

For a number of years it has been the Katy's practice, when freight cars reach a condition for retirement, to assemble them at the reclamation plant at Parsons, Kan., where, after the wheels and certain steel parts have been removed, the car bodies are offered for sale to farmer at prices varying according to the condition of the cars for use as granaries or additions to barns, and, in rare cases, even as a place of residence. This year the sale of cars has not been confined to farmers, for 33 were acquired by the Citizen Conservation Corps for use as shelters in the Kansas encampment. So great is the demand among farmers for the better car bodies that the stores department has a waiting list of more than 150 applicants for good bodies of any type.

Reimbursement to B. A. & P. Cannot Be Recovered

The United States is not entitled to recover $487,116 paid to the Butte, Anaconda & Pacific in 1925 in reimbursement of its "deficit" for the period of federal control, on the ground that the Interstate Commerce Commission made a "mistake" in its interpretation of the word "deficit" as used in Section 204 of the transportation act, the Supreme Court of the United States held in a decision rendered on November 20, reversing the decision of the circuit court of appeals that had affirmed a judgement for the government. In 71 previous cases the commission had issued certificates on the interpretation that short lines were entitled to reimbursement for the shortage in their net railway operating income in the period during which the government was operating the railroads, as compared with the "test period," but later, after there had been a change in the membership of the commission, it overruled its previous interpretation, in cases of railroads controlled by large industrial companies, and adopted the more usual interpretation of the word "deficit." In March, 1927, it instituted suit against the Butte, Anaconda & Pacific, to revoke the certificate it had issued on which payment already had been made, and it was argued on behalf of the government in court that the commission had no authority to issue a certificate, and the financial officers of the government had no authority to pay money, except to a carrier which had suffered an actual deficit in operations.

"We have no occasion to determine which of the commission's interpretations of the word 'deficit' is the correct one," said Justice Brandeis in giving the opinion of the court. "For we are of opinion that the government cannot recover the money paid in 1925, even if the commission erred in attributing to the word 'deficit' the meaning then acted on." Since Congress did not provide a method of review in authorizing the commission to adjudicate the claims of the short lines, he said, "we hold that it intended to leave the government, as well as the carrier, remediless, whether the error be one of fact or law."

I. C. C. Tries a Little Economic Planning

Confronted with rival applications by the Oregon Electric and the Southern Pacific for a certificate authorizing the construction of short lines in Washington county, Ore., to connect with the mill site of the Stimson Lumber Company, the Interstate Commerce Commission, after further hearing, has reversed the original finding of Division 4, which had denied the Oregon Electric application for authority for a 7.5-mile extension from Forest Grove on its line, and has issued a certificate authorizing the Southern Pacific to construct a 2.5-mile line from Seghers station on its line to the mill site, but has withheld issuance of a certificate to the Oregon Electric pending negotiations suggested between the two companies for the purpose of working out a plan for the joint or common use of facilities. The Southern Pacific had begun work on its line, estimated to cost $54,000, but work had been suspended by an injunction pending the obtaining of authority from the commission. The cost of the line proposed by the Oregon Electric is estimated at $259,000 and the commission expresses a hope that the necessity for its actual construction may be avoided. Commissioner Mahaffie, approving the granting of a certificate to the Southern Pacific, dissented from the report as to the Oregon Electric and Commissioners Meyer, Tate, and Miller concurred in his expression. Commissioner Brainerd, in a concurring opinion, said the certificate issued to the Southern Pacific should be so conditioned as to require the Southern Pacific to permit the joint use of its line by the Oregon Electric.

"Solely in order to create competition at this mill site the majority find the additional initial expenditures of over a quarter million dollars, and the continuing cost of duplicate operation, justified," said Commissioner Mahaffie, "that competition in railroad service is the only consideration is apparent from the majority's attempt to compel the Southern Pacific to grant trackage or make other arrangements to give the Oregon Electric access to the mill. If the Southern Pacific is sufficiently impressed by the economic folly of duplicate railroad investment by its rival, and grants it trackage or common use, as the majority obviously hope, the mill will be served by only one track. The majority is willing, in order to compel indirectly a grant of common use it cannot require lawfully, to permit wasteful construction or, at least, to threaten it. Just why it is thought that the Southern Pacific may have a greater regard for the national interest than we, ourselves have, is not easy to understand, especially as we have a statutory obligation in that regard and the Southern Pacific has none."

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VIBRATION AND CORROSION ATTACK TRAIN LINES

REG. U.S. PAT. OFF.
TONCAN
COPPER MO-LYB-DEN-UM

IRON PIPE IS FORTIFIED AGAINST THESE ASSAULTS

In train line service, vibration and corrosion concentrate on the weak spots. To be successful in such service, a pipe must combine toughness to absorb and distribute strains such as occur at the root of a thread with corrosion-resistance to withstand weakening due to rust and corrosion. « « « Because it combines these qualities to a high degree, Toncan Iron Pipe is ideal for railroad service. « « « Tests prove that Toncan Iron Pipe withstands the severe service encountered by train line pipe. « « « This product of advanced metallurgical art gives better service wherever the going is tough. Toncan Iron Pipe begins to save trouble with its installation, for it is easy to thread, flange or bend. But the greatest benefit of Toncan Pipe can only be realized as the years go by without costly repairs and upkeep. « « « This alloy of copper, molybdenum and highly refined iron has an extraordinary resistance to the elements that relentlessly destroy most ferrous pipe materials. Toncan Iron is specifically manufactured to withstand the ravages of rust. Use Toncan Iron Pipe for permanence. « « « « «

REPUBLIC STEEL CORPORATION
GENERAL OFFICES YOUNGSTOWN, OHIO

REG. U.S. PAT. OFF.
TONCAN
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IRON PIPE

Supply Trade

A. M. Castle & Company, Chicago, have been appointed exclusive sales representatives on the Pacific Coast for the **Inland Steel Company,** Chicago. The sales will be handled through the Castle Company's Los Angeles, Cal., San Francisco and Seattle, Wash., offices.

Roberts and Schaefer Company, Chicago, announce the retirement on November 14, of **Clyde P. Ross,** vice-president in charge of its railroad department, and **David E. White,** contracting manager in the railroad department. The company will continue its railroad department, covering the design and construction of coaling stations, cinder and sand handling plants, car washing plants, and accessories, through its general offices in Chicago and branches in Pittsburgh, Pa., Huntington, W. Va., and Denver, Colo., as in the past.

W. F. Bauer, manufacturers' representative for several railroad supply companies, with headquarters at Chicago, has resigned to become railroad sales engineer of the **Gould Storage Battery Corporation,** with headquarters at 32 West Randolph street, Chicago.

The firm of **Sheldon, Morse, Hutchins & Easton,** marketing counselors, with offices in the Graybar building, New York City, has been changed from a partnership into a corporation. At a recent meeting of the directors, the following officers were elected: **William H. Easton,** president; **L. W. Hutchins,** vice-president; **H. A. Morse,** treasurer; and **A. E. Welty,** secretary.

Clyde P. Ross, and **David E. White,** who have severed their connection with Roberts and Schaefer Company, as noted elsewhere in these columns, have organized the **Ross and White Company,** with offices in the Daily News building, Chicago, to engage in the designing and building of railroad locomotive coal, sand and cinder plants, and equipment for use in such facilities. **Glen O. Morford,** who has been in charge of design in the railroad department of Roberts and Schaefer Company for the past 13 years has resigned to become chief engineer of the new company.

Mr. Ross was born at Rockford, Ill., on December 3, 1882, and obtained his first experience in coal handling facilities when he entered the designing department of the Link Belt Company, Chicago, in 1901. On March 15, 1904, he severed his connection with that company to enter the employ of Roberts and Schaefer Company. Subsequently, he served as chief draftsman and contracting engineer, and for the last 13 years as vice-president and director. Mr. White was born at Cottage Grove, Tenn., on July 30, 1889, and graduated from the College of Engineering of the University of Tennessee in June, 1912. Following his graduation he was employed for several years in the engineering department of the Louisville & Nashville, and in April, 1917, entered the service of the Roberts and Schaefer Company in its engineering department, being later promoted to contracting engineer.

TRADE PUBLICATION

RESULTS WITH NO-OX-ID.—A comprehensive booklet entitled "Proof of Results with No-Ox-Id in the Railroad Field" has been issued by the Dearborn Chemical Company, Chicago. This 28-page booklet shows the wide range of railway uses for this chemically-compounded rust preventive. Numerous applications to such parts as locomotive springs, tender coal space, stored car journals, water tanks, bridges, rail bonds, machine finished locomotive and car parts, stored, piping, etc., are illustrated and described. The various adaptations of No-Ox-Id protection in the form of (1) a compound, made in various consistencies for industrial conditions; (2) an impregnated wrapper covering for use under special conditions; (3) fillers and paint primers; and (4) quick-drying protective coatings for specialized interior and exterior use, are described in the booklet, which also contains a partial list of the railroads that have used this protection in one form or another.

Equipment and Supplies

IRON AND STEEL

THE WESTERN MARYLAND has taken delivery of 2,000 tons of rail and may later place an order for 2,000 tons additional.

THE CHICAGO, BURLINGTON & QUINCY has ordered 25,000 tons of 112-lb. rails, placing 13,500 tons with the Illinois Steel Company, 6,500 tons with the Inland Steel Company and 5,000 tons with the Colorado Fuel & Iron Company. Orders were also placed for 8,000 tons of track fastenings, each company being awarded an amount in proportion to the rail award.

MISCELLANEOUS

THE NORTHERN PACIFIC has ordered 1,000,000 ties and 3,000,000 ft. of bridge timber, at an estimated cost of $660,000, for maintenance work during 1935. Of the ties, 350,000 will be hardwood produced at Minnesota and Wisconsin mills, while the remainder, mostly fir, will be turned out of mills in the West and on the West coast. The bridge timber order was placed early with western mills as a means of stimulating business during the winter months, while the ties were purchased early to enable the mills to turn them out during the winter months and afford time to season and treat them.

Construction

BALTIMORE & OHIO.—The New York Public Service Commission has approved as not excessive a low bid of $83,849 submitted by the Vang Construction Company, Pittsburgh, Pa., covering the elimination of the West Main street crossing of this road in the village of LeRoy, Genesee county, N. Y. The railroad company proposes to award the contract to the low bidder and the commission directed the railroad to begin the work as soon as practicable.

CHESAPEAKE BEACH.—The Interstate Commerce Commission has further extended the time for the beginning and completion of construction of the proposed ferry service across Chesapeake Bay, under the certificate issued August 30, 1930, to May 1, 1934, and December 31, 1935, respectively.

CITY OF ST. LOUIS.—The city of St. Louis, Mo., is preparing to file applications for grants of money from the Federal Public Works Administration for public construction projects, among which are the following: A viaduct to carry Kingshighway over the Missouri Pacific tracks, $115,000 requested, cost $550,000; viaducts to eliminate grade crossings with the Wabash on DeBalivere and Hamilton avenues and Waterman boulevard, $125,000 requested, cost $625,000; a viaduct to carry Hampton avenue over the tracks of the Missouri Pacific and the St. Louis-San Francisco, the River Des Peres and Manchester avenue, $90,000 requested, cost $375,000; and additional railroad approaches to the St. Louis Municipal bridge across the Mississippi river, $225,000 requested, cost $925,000.

DELAWARE, LACKAWANNA & WESTERN.—This company has been authorized to do certain work by direct employment of labor and purchase of materials at actual cost not to exceed $96,327, in connection with the elimination of the grade crossings in the towns of Horseheads and Big Flats, Chemung county, N. Y. This work consists of raising its tracks a maximum of seven feet for a distance of 3,950 feet under railroad traffic, constructing falsework to support and carry its tracks at the location of the structure, erecting structural steel on temporary trestle and sliding bridge into final location between train operations, temporary and permanent changes in its signal lines, removing existing crossing facilities and closing crossings.

LEHIGH VALLEY-NEW YORK CENTRAL-ERIE-NEW YORK, CHICAGO & ST. LOUIS-PENNSYLVANIA-BALTIMORE & OHIO-SOUTH BUFFALO.—An amendment to the order providing for the elimination of the Tifft street crossings in Buffalo, N. Y. has been adopted by the New York Public Service Commission and provides for the elimination of the crossings by placing the highway above the railway tracks on a different alignment than that provided for in the previous order. There

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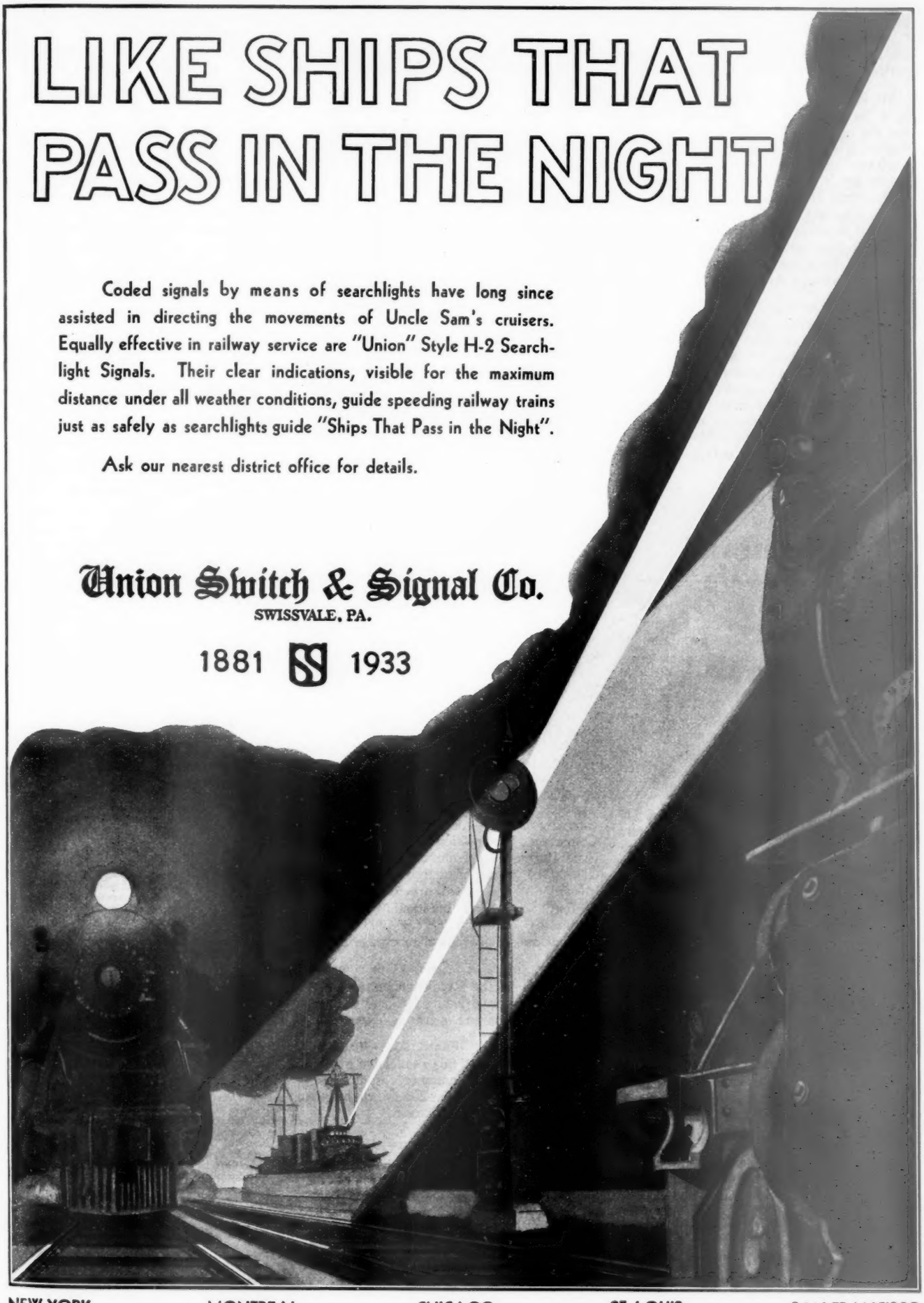
LIKE SHIPS THAT PASS IN THE NIGHT

Coded signals by means of searchlights have long since assisted in directing the movements of Uncle Sam's cruisers. Equally effective in railway service are "Union" Style H-2 Searchlight Signals. Their clear indications, visible for the maximum distance under all weather conditions, guide speeding railway trains just as safely as searchlights guide "Ships That Pass in the Night".

Ask our nearest district office for details.

Union Switch & Signal Co.
SWISSVALE, PA.

1881 1933



NEW YORK MONTREAL CHICAGO ST. LOUIS SAN FRANCISCO

are 17 tracks at Tifft street and the elimination cost is estimated at $670,000.

MISSOURI-KANSAS-TEXAS.—Agreements have been reached between this company and the state of Texas for the construction of a subway to carry United States Highway No. 81 under the railroad's tracks at Fratt, and for overpasses to carry State Highway No. 31 and United States Highway No. 81 over the railroad's tracks at Waco and Bruceville, respectively. These projects will be financed with funds made available through the National Industrial Recovery Act.

OREGON ELECTRIC.—The Interstate Commerce Commission has reversed its decision denying to this company authority to extend its line 7.5 miles from Forest Grove, Oreg., to a lumber mill, but has withheld a certificate pending negotiations between the applicant and the Southern Pacific to secure equal access by that company to the area served. The Southern Pacific has been authorized to construct a 2.5-mile line to the mill.

Financial

CHICAGO & EASTERN ILLINOIS.—*Salary of Trustee.*—The Interstate Commerce Commission has approved a maximum of $25,000 as the annual compensation to be paid to Charles M. Thompson as trustee of this company's estate.

CHICAGO & NORTH WESTERN.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority to abandon a branch line between Eden, Minn., and Mantorville, 6.8 miles.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority to abandon its line between Eyres, Ill., and Ebner, 8.6 miles, and to operate between those points over the line of the Chicago, Burlington & Quincy.

CHICAGO, ROCK ISLAND & PACIFIC.—*Protest Against Tentative Valuation.*—This company has filed with the Interstate Commerce Commission a protest against the tentative valuation of the properties in the Rock Island system recently issued in which the final value for rate-making purposes as of December 31, 1932, was placed at $437,176,012. The company contends the value should be not less than $525,000,000.

CHICAGO, ROCK ISLAND & PACIFIC.—*Consolidation Proceeding.*—The Interstate Commerce Commission has allowed an extension of time to January 1, 1934, in which this company may file its acceptance of the condition imposed in the report on the company's consolidation plan requiring it to abide by the commission's orders as to the acquisition of the Wichita Northwestern at its commercial value. The company had asked to have the condition eliminated, on the ground, among others, that as it is in reorganization proceedings it was not in a position to accept such a condition.

HALITE & NORTHERN.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority to abandon its line from Halit to Coverdale, N. Y., 3.19 miles.

ILLINOIS CENTRAL.—*Y. & M. V. Bonds.*—The Interstate Commerce Commission has authorized the Yazoo & Mississippi Valley to extend for five years the maturity of $17,037,000 of gold improvement bonds due January 1, 1934. The Illinois Central has been authorized to continue the pledge of $1,605,000 of these bonds with the Railroad Credit Corporation. $14,949,000 of the bonds are pledged with the Reconstruction Finance Corporation.

MIDLAND CONTINENTAL.—*P. W. A. Loan.*—This company has applied to the Interstate Commerce Commission for approval of a loan of $60,000 from the Public Works Administration to purchase an oil-electric locomotive.

MINNEAPOLIS & ST. LOUIS.—*Receiver's Certificates.*—The Interstate Commerce Commission has authorized this company to issue $1,185,000 of receiver's certificates to renew or extend a like amount which mature on November 25.

MISSOURI PACIFIC.—*Abandonment.*—The trustees have applied to the Interstate Commerce Commission for authority to abandon a branch line from Yates Center to West Junction, Kan., 5. 1 miles.

NEW YORK CENTRAL.—*Disposes of Lehigh Valley Stock.*—This company has sold the 50,000 shares of Lehigh Valley common stock which it has held in its treasury.

NEW YORK CENTRAL.—*Notes.*—This company has applied to the Interstate Commerce Commission for authority to issue and re-issue from time to time $75,000,000 of 6 per cent promissory notes, to banks in renewal of previous notes, including $69,743,145 outstanding, and to pledge as collateral $175,000,000 of refunding and improvement mortgage bonds.

QUINCY.—*R. F. C. Loan.*—This company has applied to the Reconstruction Finance Corporation for a loan of $7,500 to meet current accounts and operating expenses.

ST. LOUIS-SAN FRANCISCO.—*Abandonments.*—Trustees of this road have applied to the Interstate Commerce Commission for authority to abandon 201 mi. of branch lines in Kansas and Missouri.

ST. LOUIS-SAN FRANCISCO.—*Salaries of Trustees and Counsel.*—The Interstate Commerce Commission has issued orders approving $25,000 as the maximum compensation for J. M. Kurn as trustee, $18,000 for J. G. Lonsdale as trustee, and $18,000 for E. T. Miller as counsel for the trustees.

SOUTHERN PACIFIC.—*Abandonment.*—The Interstate Commerce Commission has authorized this company to abandon a portion of a branch line extending from Dallas, Ore., to the end of the line at Monmouth, 6.8 miles.

WABASH.—*Franklin Asks Authority to Serve on Wabash.*—W. S. Franklin, vice-president of the Pennsylvania, has applied to the Interstate Commerce Commission for an order authorizing him to serve also as president and director of the Wabash. The commission on October 26 authorized him to become an officer of the Pennsylvania but reserved consideration of the question of his serving also on the Wabash and Lehigh Valley. The application requests that authorization be issued as to the Wabash, which is in receivership and which is allocated to the Pennsylvania system in the commission's consolidation plan, and that the question as to the Lehigh Valley be reserved.

Average Prices of Stocks and of Bonds

	Nov. 21	Last week	Last year
Average price of 20 representative railway stocks..	38.54	37.10	24.71
Average price of 20 representative railway bonds..	62.06	63.30	58.60

Valuation Reports

The Interstate Commerce Commission has issued final valuation reports finding the final value for rate-making purposes of the property owned and used for common-carrier purposes as of the respective valuation dates as follows:

Minarets & Western	$3,060,000	1927
Montana	36,000	1927
Patapsco & Back Rivers	1,715,000	1927
Trona	890,000	1927
Richmond Terminal	3,420,000	1927
Chaffee	90,000	1927
Crystal River & San Juan	118,500	1927
Crystal River	415,000	1927
Middle Creek	16,000	1927
Mississippian	190,000	1928
Newaukum Valley	410,000	1927

Dividends Declared

Albany & Susquehanna.—$4.50, semi-annually, payable January 2 to holders of record December 15.

Atlantic, Birmingham & Coast.—Preferred, $2.50, semi-annually, payable January 2 to holders of record December 12.

Bangor & Aroostook.—Common, 50 cents, quarterly; Preferred, $1.75, quarterly, both payable January 1 to holders of record December 2.

Boston & Albany.—$2.25, quarterly, payable December 30 to holders of record November 29.

Chesapeake & Ohio.—Common, 70 cents, quarterly, payable January 1 to holders of record December 8.

Chesapeake Corporation.—Capital, 63 cents, quarterly, payable January 1 to holders of record December 8. (Stock is now on a $2.50 annual basis.)

Chestnut Hill.—75c, quarterly, payable December 4 to holders of record November 20.

Cincinnati, New Orleans & Texas Pacific.—Common, $8.00, payable December 26 to holders of record December 5; Preferred, $1.25, quarterly, payable December 1 to holders of record November 25. (The last previous payment on the common stock was a semi-annual dividend of $4.00 on June 24, 1932.)

Elmira & Williamsport.—Preferred, $1.61, semi-annually, payable January 2 to holders of record December 20.

Illinois Central.—Leased Lines.—$2.00, semi-annually, payable January 2 to holders of record December 11.

Kansas, Oklahoma & Gulf.—6 Per Cent Series A and B Preferred, 3 per cent, payable December 1 to holders of record November 23.

Lackawanna R. R. of New Jersey.—4 Per Cent Guaranteed, $1.00, quarterly, payable January 2 to holders of record December 8.

Morris & Essex.—2.125 per cent, payable January 2 to holders of record December 26.

New York, Lackawanna & Western.—5 Per Cent Guaranteed, $1.25, quarterly, payable January 2 to holders of record December 15.

Pittsburgh, Bessemer & Lake Erie.—6 Per Cent Preferred, 3 per cent, semi-annually, payable December 1 to holders of record November 15.

Sussex.—50c, semi-annually, payable January 2 to holders of record December 16.

Valley R. R. of N. Y.—$2.50, semi-annually, payable January 2 to holders of record December 16.

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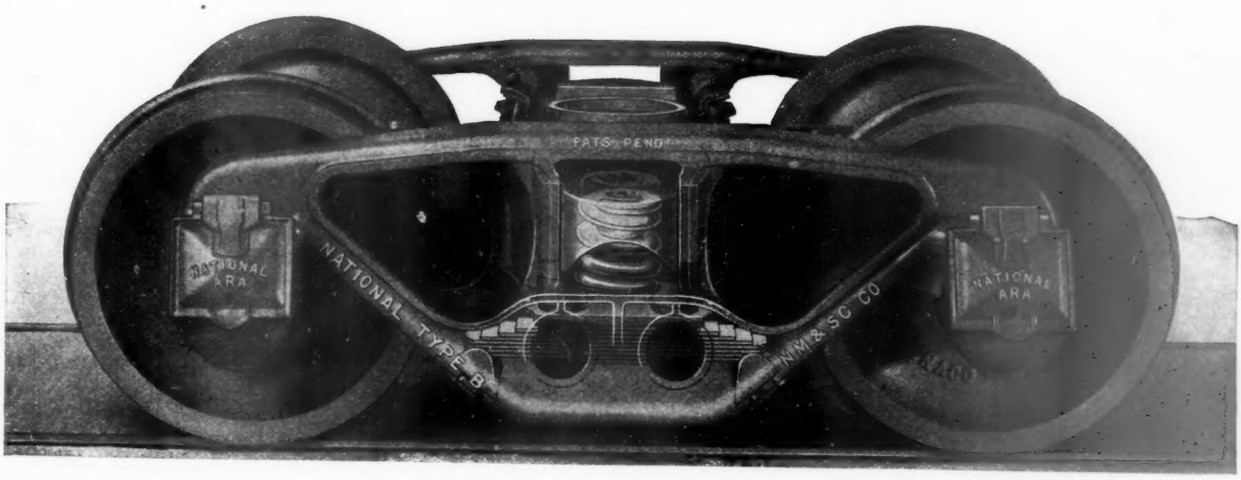
NATIONAL TYPE "B" TRUCK



Light Weight

Spring Plank Eliminated

Easy Riding Protects Lading

NATIONAL MALLEABLE AND STEEL CASTINGS CO.
General Office—Cleveland, O.

Sales Offices: New York, Philadelphia, Chicago, St. Louis, San Francisco
Works: Cleveland, Chicago, Indianapolis, Sharon, Pa., Melrose Park, Ill.

Railway Officers

EXECUTIVE

G. R. Loyall has resigned as receiver of the Norfolk Southern and **Morris S. Hawkins** has been appointed to replace him as co-receiver with L. H. Windholz, with headquarters at Norfolk, Va.

FINANCIAL, LEGAL AND ACCOUNTING

Irving H. Buckle, who has been appointed freight claim agent of the Minneapolis & St. Louis, as noted in the *Railway Age* for November 11, was born on June 21, 1886, at Plainfield, N. J., and studied law at night school. His first railway service was with the engineering department of the Central of New Jersey in the summer of 1904. Two years later he entered the service of the engineering department of the Chicago, Milwaukee, St. Paul & Pacific and was engaged in

Irving H. Buckle

preliminary surveys and location work and later in the construction of the Pacific extension of this road. Eventually Mr. Buckle left the Milwaukee to engage in private business, returning to railroad service in the fall of 1923 with the accounting department of the Minneapolis & St. Louis. After a year and a half he was transferred to the personal injury division of the legal department, where he remained until his appointment as freight claim agent, with headquarters at Minneapolis, Minn.

TRAFFIC

B. F. Moffat, freight traffic manager of the Minneapolis & St. Louis, has been appointed to the newly-created position of traffic manager, in which position he will assume the duties of **J. A. Lucey,** chief traffic officer, who has retired because of ill health. Mr. Moffat will have his headquarters as before at Minneapolis, Minn.

H. E. C. Hawkins, who has been appointed chief freight traffic officer of the Florida East Coast, with headquarters at St. Augustine, Fla., as reported in the *Railway Age* of November 4, was born on September 28, 1886, at Lake George, Fla. He was educated in the public schools and entered railroad service with the Florida East Coast in December, 1902, as mail clerk. He subsequently served in various clerical positions in the freight traffic de-

H. E. C. Hawkins

partment of the same road, including the positions of stenographer, loss and damage claim investigator, rate clerk and chief rate clerk, and in April, 1914, he was appointed chief clerk in the freight traffic department. In May, 1919, Mr. Hawkins was appointed general freight agent and freight claim agent, also serving in the same position on the Florida East Coast Car Ferry Company, operating a line of car ferries between Key West, Fla., and Havana, Cuba. Mr. Hawkins served in the latter position until November 1 of this year, when the receivers of the company appointed him chief freight traffic officer of the road.

MECHANICAL

W. H. McAmis, assistant mechanical superintendent on the Missouri Pacific, has been promoted to the newly-created position of mechanical superintendent, with headquarters as before at St. Louis, Mo. **J. W. Lemon,** superintendent of shops at Sedalia, Mo., has been promoted to superintendent of the Texas and Louisiana lines of the Missouri Pacific, with headquarters at Houson, Tex., succeeding **A. T. Householder,** deceased. **G. T. Callender,** superintendent of shops at North Little Rock, Ark., has been transferred to Sedalia, to succeed Mr. Lemon. **Albert Hubener,** general foreman at North Little Rock, has been promoted to superintendent of shops at that point, to succeed Mr. Callender.

OBITUARY

M. L. Hayes, superintendent of transportation of the Missouri Pacific, with headquarters at St. Louis, Mo., died on November 14, following an operation.

Frank Lawlor, paymaster of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Chicago, died of a heart attack on November 19 at his home. He was 51 years of age.

William G. Lerch, vice-president and secretary of the Chicago Great Western, with headquarters at Chicago, died on November 21 at his home at Highland Park, a suburb of Chicago, at the age of 62 years.

J. L. Hohl, assistant traffic manager of the Denver & Rio Grande Western, with headquarters at Chicago, died on November 4. Mr. Hohl had been in railway service for 43 years. He was born at Palmyra, Mo., and entered railway service in 1890 in the traffic department of the Chicago, Burlington & Quincy at St. Joseph, Mo. In 1894 he joined the traffic department of the Chicago, Rock Island & Pacific and served in various positions with this company until 1903, when he was appointed an agent on the Mississippi River & Bonne Terre (now part of the Missouri Pacific), later being advanced to yardmaster with this company. In 1910 Mr. Hohl went with the Denver & Rio Grande Western as traveling freight agent as St. Louis, Mo., and in 1916 he was appointed general agent, with the same headquarters. During the World War, he served with the Inland Traffic Service at Kansas City, Mo., returning to railway service in 1921 as general agent for the Denver & Rio Grande Western, with headquarters at Chicago. He was advanced to assistant traffic manager seven years later, which position he was holding at the time of his death.

John D. Farrell, who was vice-president of the Oregon-Washington Railroad & Navigation Company until 1926 and has since been president of the Seattle (Wash.) Light Company, died on November 16 at Los Angeles, Cal. Mr. Farrell was born on July 31, 1856, at Brasher Falls, N. Y., and entered railway service in 1877 as a trackman on the Chicago & North Western. In 1879 he went with the Chicago, Milwaukee, St. Paul & Pacific, serving successively as a timekeeper, foreman of material yard and foreman of bridges, building and water service. In July, 1882, Mr. Farrell joined the Canadian Pacific as a chief clerk, and later served as foreman of bridges, building and water service, assistant superintendent of bridges, buildings and water service, brakeman, station agent and conductor. In March, 1888, he went with the Chicago, St. Paul & Kansas City (now the Chicago Great Western), where he was appointed division superintendent in September, 1889. Three years later Mr. Farrell went with the Great Northern as superintendent of the Cascade division, later serving as assistant general superintendent and general superintendent of the Western district. For some years following 1895 he was engaged in other business, returning to the Great Northern as assistant to the president at Seattle, in February, 1903. In 1909 Mr. Farrell became connected with the Oregon-Washington Railroad & Navigation Company as vice-president and general manager, later serving as president and then as vice-president. He left this company in 1926 to become president of the Seattle Lighting Company.